Research Report KTC-91-10

EVALUATION OF HEADWALLS AND OUTLETS FOR GEOCOMPOSITE EDGE DRAINS ON I-75 AND I-71

by

L. John Fleckenstein Engineering Geologist

David L. Allen Chief Research Engineer

and

Jack Harison Graduate Research Assistant

Kentucky Transportation Center College of Engineering University of Kentucky Lexington, Kentucky

and

in cooperation with Transportation Cabinet Commonwealth of Kentucky

The contents of this report reflect the views of the authors who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the University of Kentucky, nor the Kentucky Transportation Cabinet. This report does not constitute a standard, specification, or regulation. The inclusion of manufacturer names and trade names are for identification purposes and are not to be considered as endorsements.

August 1991

REPRODUCED BY:
U.S. Department of Commerce
National Technical Information Service
Springfield, Virginia 22161

EXECUTIVE SUMMARY

Longitudinal, round, perforated pipe edge drains have been used along Kentucky roadways for approximately two decades. Panel (fin) edge drains were first used in Kentucky in 1984. Most of these edge drains were installed on the Interstate and Parkway systems.

Several problems related to the drains have been noted in the last seven years. A number of these problems have been observed to be related to flexible outlet pipes and headwalls.

A recent study was initiated to evaluate headwalls and outlets on I-75 from Lexington, Kentucky to Cincinnati, Ohio (approximately 70 miles) and on I-71 from Louisville, Kentucky to I-75 in Northern Kentucky (approximately 68 miles). This study was initiated as a first phase of a much more intensive study which will evaluate all edge drains and outlets on Interstates and Parkways in Kentucky.

This report documents findings of the investigation of 234 edge drain outlets. Of the 234 outlets investigated, approximately 43 percent of the edge drain outlets inspected were out of service. Approximately 50 percent of the outlet pipes had been damaged during installation. More significant problems were found at the headwall and outlet pipe connection than any other location in the drainage system.

It appears that a maintenance program should be established to clean the troughs of the headwalls and to check the screens for clogging and rust. The metal screens should be replaced with galvanized screens.

Positive flow should also be maintained from the headwalls. The buildup of grass and silt can eventually detour some of the flow. Headwalls located in cuts are more prone to become covered or ponded.

Reproduced from best available copy.

Edge drains and outlets should be inspected after they are installed.

Rigid outlet pipe should be precast into the headwalls. This should help eliminate problems occurring at the headwall connection. Currently, a rigid outlet pipe is connected to an approximately 2-foot long "pigtail" (4-inch flexible pipe) which is precast into the headwall.

Introduction

Longitudinal, round, perforated pipe edge drains have been used along Kentucky roadways for approximately two decades. Panel (fin) edge drains were first used in Kentucky in 1984. Most of these edge drains were installed on the Interstate and Parkway systems.

Several problems related to the drains have been noted in the last seven years. Several of these problems have apparently lead to premature pavement failures. These panel drains being include problems construction due to during damaged installation techniques and vertical flexibility of the panel core. Problems were also noted at edge drain outlets where they were not constructed to grade, and in addition, were partially crushed. The metal screens over the mouth of the outlet pipes in the headwalls permitted platelets of calcium carbonate (these form on the surface of the water in the edge drains and break up during heavy flow) become lodged behind the screen decreasing flow and increasing siltation. Metal screens also rusted and disintegrated allowing animals to enter and build nests in the outlet pipes. Several guardrail posts were driven through outlets on one rehabilitation project. Several stained areas appeared on pavement surfaces throughout the state on rehabilitation projects where the old rigid pavement had been broken, seated, and overlaid. Calcium fines were being forced to the surface through the asphaltic concrete overlay. The drains were apparently being overcharged during heavy rains due to the distance between headwalls. Problems have also been noted at median boxes where the edge drain outlet pipes were placed at the bottom of the box and eventually became buried by the accumulation of material in the bottom of the box. Separations have also been discovered between the mainline and the outlet pipe.

In the past seven years, several changes have been made in Kentucky design and installation procedures for highway edge drains. Kentucky currently specifies a four-inch trench for panel drains and a sand slurry backfill. The edge drains are also placed on the shoulder side of the trench. This permits the sand backfill to act as an additional filter medium to reduce blinding of the fabric and allows for another means for the water to travel if there is an installation problem with the panel. To date, no blinding has been observed at the sand-concrete interface.

Kentucky currently specifies a smoothlined rigid outlet pipe which should decrease damage to outlets during installation, provide for smoother flow, and reduce siltation.

Edge drain outlets are no longer placed at the bottom of median boxes. The outlets are placed at a sufficient elevation to permit sedimentation in the bottom of the box, but still permit proper grade from the edge drain. In addition, headwalls are also used in the medians.

Edge drain headwall spacings are now specified. For a slope greater than two percent, the headwalls are spaced at 500-foot intervals; for slopes less than two percent, the headwalls are spaced at 250-foot intervals. Outlet pipes a now installed 90 degrees to the shoulder in order that they may easily be located during rehabilitation of guardrail sections.

Kentucky now specifies a larger mesh opening and galvanized coated rodent screens. This will decrease the buildup of calcium carbonate platelets that tend to collect behind the screen.

Visual Inspection of Headwalls and Outlets on Interstate 75 and Interstate 71

Due to the number of outlet problems noted in the last seven years, a study was initiated to evaluate headwalls and outlets on I-75 from Lexington to Cincinnati (approximately 70 miles) and on I-71 from Louisville to I-75 (approximately 68 miles). This study was initiated as a first phase of a more intensive study which will evaluate all edge drains and outlets on Interstates and Parkways in Kentucky. Two inspection sheets were developed for the study in order that various features and distresses could be quickly noted (Appendix A). A computer program was written for entering the field data and to provide a statistical data base. A two-man crew conducted the inspections. Inspection equipment included a Cues Mini Camera with 300 feet of push cable, a VCR, input mike for comments, and two voiceactivated, two-way radio's communication.

Due to the time and budget constraints, only a portion of the headwalls could be evaluated on each of the routes. It was decided that one headwall and one outlet per mile would provide sufficient data for an analysis.

Edge Drain Headwall and Outlet Pipe Condition Survey on I-75 and I-71

Debris Accumulation in Headwalls

A total of 122 headwalls and outlets were inspected on I-75. Of the 122 headwalls inspected, 35 percent were clean (no debris in the trough of the headwall), 41 percent were partially covered (outlet was partially visible), nine percent were covered (outlet pipe not visible), and 15 percent were plugged (outlet pipe was completely filled with debris). A total of 127 headwalls and outlets were inspected on Interstate 71. Of the 127 headwalls, 43 percent were clean,

30 percent were partially covered, five percent were covered, and 22 percent were plugged. Averages for I-75 and I-71 were: 39 percent were open, 36 percent were partially covered, seven percent were covered, and 18 percent were plugged. Statistical information on the headwall conditions is contained in Table 1 (A detailed statistical summary and the field data base is contained in Appendix B for I-75, and in Appendix C for I-71).

Table 1. Statistical Data on Headwall Condition

LOCATION->	⊦ 75	F-71	F71 AND F 75 (AVG.)
% CLEAN	34.7	42.5	38.5
% PARTIALLY COVERED	41.3	30.1	35.9
% COVERED	9.1	5.3	7.2
% PLUGGED	14.9	22.1	18.4

Condition of Rodent Screens

The rodent screens were visually inspected for signs of clogging and rusting. Averages for I-71 and I-75 were: 28 percent of the headwalls did not have screens; 42 percent of the screens were open, 15 percent were partially blocked, 15 percent were blocked, and 34 percent were severely rusted (Table 2). The galvanized screens now specified should aid in preventing corrosion.

Table 2. Screen Condition

LOCATION>	I-75	l-71	I-71 AND I-75 (AVG.)
% MISSING	30.8	24.8	27.9
% OPEN	35.8	46.8	41.1
% PARTIALLY OPEN	16.7	14.2	15.5
% BLOCK	16.7	14.2	15.5
% SEVERELY RUSTED	35. 0	33.0	34.3

Signs of Siltation

The headwalls were inspected for signs of siltation. It was difficult to quantify siltation since only 39 percent of the headwalls were free of gravel, grass, and soil that accumulated in many headwalls. Most of the drains and headwalls were relatively free of silt. There was some buildup of calcium carbonate in the corrugations which would break loose and become logged behind the screen. Table 3 indicates 83 percent of the headwalls had no signs of siltation. A significant amount of silt was observed inside the outlet pipes between milepost 145 and milepost 151.39 on Interstate 75. Further inspection should be conducted in this area to observe the condition of the filter fabric.

Table 3. Siltation at Headwall

LOCATION->	I-75	⊦71	I-71 AND I-75 (AVG.)
% NONE	85.0	81.4	83.2
% SLIGHT	6.0	11.5	8.8
% MODERATE	4.0	4.4	4.2
% SEVERE	5.0	3.8	3.8

Signs of Flow and Positive Drainage

Each outlet was inspected for signs of flow and to determine if positive drainage had been provided. On the average for both routes, 89 percent of the headwalls showed flow and 74 percent of the headwalls had been provided with a proper grade to drain water away from the headwalls. Approximately 27 percent of the outlets on I-75 were not properly drained (Table 4).

Table 4. Summary of Headwalls that were Flowing and Those with Positive Drainage.

LOCATION	1-75	I-71	I-75 AND I-71 (AVG.)
INDICATIONS OF FLOW %	84.0	94.7	89.2
POSITIVE DRAINAGE FROM HEADWALL %	63.0	85.0	74.0

Condition of Outlet Pipes

A total of 249 outlet pipes were inspected on I-71 and I-75. The pipes were inspected for sags, siltation, standing water, compression, rips, and other noticeable distress. Approximately 35 percent of the outlet pipes that were inspected were fully open, 16 percent were 60 to 80 percent open, 14 percent were 40 to 60 percent open, and 35 percent were less than 40 percent open (Table 5). Approximately 50 percent of the outlet pipes had failed in compression.

Table 5. Outlet Pipe Flow Information

LOCATION->	I-75	I-71	I-75 & I-71 (AVG.)
(%) OPEN	25.6	46.0	36.5
60%-90% OPEN	29.8	1.8	16.2
40%-60% OPEN	8.3	19.5	13.7
LESS THAN 40% OPEN	36.3	13.7	34.6

In Table 6, the distress information is broken down into percentages for each of the assigned outlet pipe sections as shown in Figure 1. Table 6 indicates that for I-75 there were more significant problems at A than B, E, or F. More significant problems occurred on I-71 at B than A, E, or F. It

appears that more significant problems have occurred at location A which is located on the backside of the headwall. It also appears that pipes are better backfilled in the mainline than for the outlet pipes.

Figure 1. Assigned Outlet Pipe Sections

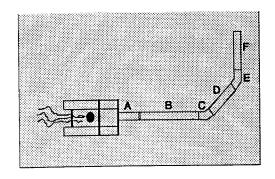


Table 6. Outlet Pipe Distress Information

LOCATION	SAG (%)	COMPRESSED PIPE AND/OR COUPLING %	RIP, SEPARATION AT COUPLING AND/OR BACKFILL IN THE PIPE %
I-75 A	55.30	45.40	24.00
8	57.80	24.80	12.30
E	26.40	3.30	0.00
F	24.00	1.60	0.00
I-71 A	47.00	23.00	6.20
В	40.60	32.70	7.10
E	8.00	0.90	0.00
F	3.60	1.80	0.00
I-75 AND I-71 A	55.15	34.20	15.10
В	49.20	28.75	9.70
E	17.20	2.10	0.00
F	13.80	1.70	0.00

* Pipe Sections C and D are only applicable to rigid outlet pipe installations. Rigid outlet pipes were not included in this inspection.

Headwall and Outlet Condition

Table 7 indicates the working condition of each headwall and its associated outlet pipe. The outlet was considered fully in service if the headwall was clean and the outlet pipe was greater than 60 percent open. The outlet was considered partially open if the headwall was partially covered and/or the outlet was 40 percent to 60 percent open. The outlet was considered out of service if the headwall was plugged and/or if the outlet pipe was less than 40 percent open.

On the average for both routes, 43 percent of the outlets were out of service, and 22 percent of the outlets were fully in service with the remainder being partially in service (Table 7).

Table 7. Headwall and Outlet Condition

LOCATION>	⊦ 75	∔71	I-75 AND I-71 (AVG.)
FULLY IN SERVICE	19.80	25.60	22.70
PARTIALLY IN SERVICE	37.20	31.00	34.10
OUT OF SERVICE	43.00	43.40	43.20

Conclusions

Approximately 43 percent of the edge drain outlets inspected were out of service. Approximately 50 percent of the outlet pipes had been damaged during installation. More significant problems were found at the headwall and outlet pipe connection than any other location in the drainage system.

It appears that a maintenance program should be established to clean the troughs of the headwalls and to check the screens for clogging and rust. The metal screens should be replaced with galvanized screens.

Positive flow should also be maintained from the headwalls. The buildup of grass and silt can eventually detour some of the flow. Headwalls located in cuts are more prone to become covered or ponded.

Edge drains and outlets should be inspected after they are installed.

Rigid outlet pipe should be precast into the headwalls. This should help eliminate problems occurring at the headwall connection. Currently, a rigid outlet pipe is connected to an approximately 2-foot long "pigtail" (4-inch flexible pipe) which is precast into the headwall.

		•	
•			

APPENDIX A FIELD DATA SHEETS

		•	

	··- <u>1</u> -	- T	 - 1	 	 1	 	 	T			Т	
FILM BOLL												
NOTES												
SUHTACE DISTRESS 1. POT HOLE STAINING 2. OUT 3. INSIDE, 4. CL 5. CON. JT. 6. SHOULD.												
DRAINAGE 1. GOOD 2. POOR												
FLOW 1. YES 2. NO												
SILT. 1. NONE 2. SLIGHT 3. MOD. 4. SEV.												
SCREEN 1. NONE 2. OPEN 3. PT. OPEN 4. BLOCK												
COVER MATER. 1. GRAV. 2. DIRT. 3. VEG. 4. CON.												
OUTLET 1. CLEAN 2. PT. COVER. 3. COVER. 4. PLUGGED												
LOCATION & TREE OF STREET								_		_	-	_
DIRECTION.							 _		ļ .	<u> </u>		_
MILEPOST												
ROUTE												

VIDEO TAI	E	_						
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	COMMENTS							
COUPLING ANEL D SILTED	ш							
8. RIP IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED	ш							
6. BAC 7. SEP- 8. RIP 1 9. COM	۵							
E 0	ပ							
1. SAG 2. SAG W/STANDING WATER 3. SAG W/SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE	В							
1. SAG 2. SAG W/STANDING W 3. SAG W/SILTATION 4. COMPRESSED COUP 5. COMPRESSED PIPE	4							
2. RIGI							-	
DIRECTION								
MILEPOST				,				
ROUTE								

APPENDIX B SUMMARY OF I-75

******* SUMMARY******* ****** PAVEMENT SUBDRAIN EVALUATION ****** HEADWALL & OUTLET PIPE

ROUTE = I-75

DIRECTION = SOUTH+NORTH INSP.DATE = MAY/JUNE 1991

	NUMBER	PERCENTAGE
I. CHEAN HEADWILL	42	34.70
* WITH OPEN OUTLET PIPE (> = 60% OPEN)	24	19.80
* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	3	2.50
* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	15	12.40
2. PT. COVERED HEADWALL	50	41.30
* WITH OPEN OUTLET PIPE (> = 60% OPEN)	30	24.80
* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	5	4.10
* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	15	12.40
3. COVERED HEADWALL	11	9.10
* WITH OPEN OUTLET PIPE (> = 60% OPEN)	6	5.00
* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	1	0.80
* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	4	3.30
4. PLUGGED HEADWALL	18	14.90
* WITH OPEN OUTLET PIPE (>= 60% OPEN)	7	5.80
* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	1	0.80
* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	10	8.30
5. HEADWALL & OUTLET PIPE CONDITION * INSPECTED HEADWALL & PIPE * FULLY IN SERVICE * PT. IN SERVICE * OUT OF SERVICE	ON: 121 24 45 52	19.80 37.20 43.00

Note: -Fully in Service = headwall is clean with pipe > 60% open -PT. in service = clean headwall with pipe 40-60% open, or PT. covered/covered headwall with pipe 40%-60% open. -Out of service = Plugged headwall, or outlet with pipe < 40% open

****** SUMMARY******* ****** PAVEMENT SUBDRAIN EVALUATION ****** HEADWALL

ROUTE = I-75

DIRECTION = SOUTH+NORTH INSP.DATE = MAY/JUNE 1991

	NUMBER	PERCENTAGE
1. INSPECTED HEADWALL	121	
2. HEADWALL CONDITION: CLEAN HEADWALL PT. COVERED HEADWALL COVERED HEADWALL PLUGGED HEADWALL	42 50 11 18	34.70 41.30 9.10 14.90
3. COVERING MATERIAL: GRAVEL OR GRAVEL + DIRT. OR DIRT.+ VEG. OR VEG. + CON. OR CON. +	40 45 49 1	33.10 37.20 40.50 0.80
4. SCREEN: NONE OPEN PARTIALLY OPEN BLOCK	37 43 20 20	30.60 35.50 16.50 16.50
RUSTED SCREEN	42	34.70
5. SILTATION: NONE SLIGHTLY MODERATELY SEVERLY	102 7 6 6	84.30 5.70 5.00 5.00
6. FLOW: YES NO	102 19	84.30 15.70
7. DRAINAGE: GOOD POOR	76 45	62.80 37.20

****** SUMMARY ******* ****** PAVEMENT SUBDRAIN EVALUATION ****** ***** OUTLET PIPE *****

ROUTE = I-75

DIRECTION = SOUTH+NORTH INSP.DATE = MAY/JUNE 1991

INDE DAIL		
T INSPECTED OUTLET PIPE	NUMBER	PERCENTAGE
T. TNSPECTED OUTLET PIPE	121	
TT OPEN CUPTLET PIPE (>80% OPEN	31	25.60
TIT COMPRESED/BLOCKED OUTLET PIPE	90	74.40
III. COMPRESSED/ BEOCKED COIDER 1222	36	29.80
* 60% - 80% OPEN	10	8.30
* 40% - 60% OPEN	10	36.30
I. INSPECTED OUTLET PIPE II. OPEN OUTLET PIPE (>80% OPEN III. COMPRESSED/BLOCKED OUTLET PIPE * 60% - 80% OPEN * 40% - 60% OPEN * < 40 % OPEN OR BLOCKED	44	30.30
IV. OUTLET PIPE WITH PROBLEM AT/NEA HEADWALL (AT A) 1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED PANEL	R OUTLET/	
IV. OUTLET PIPE WITH PROBLEM HIT HER	96	79.30
HEADWALL (AT A)	10	15.70
1. SAG	13	26 40
2. SAG W/ STANDING WATER	32	13 20
3. SAG W/ SILTATION	16	13.20
4 COMPRESSED COUPLING	30	24.80
5 COMPRESED PIPE	25	20.70
C DACUETTI IN DIDE	18	14.90
o. DACATILL IN FILE	4	3.30
7. SEPARATION AT COUPLING	7	5.80
8. RIP IN PIPE	,	0′00
9. COMPRESSED PANEL	U	0.00
10. COMPRESSED AND SILTED	_	0.00
PANEL	0	0.00
V OUTTET PIPE WITH PROBLEM AT B:	83	68.60
1 976	5	4.10
2 CAC W/ SMANDING WATER	42	37.20
Z. SAG W/ STANDING WATER	20	16.50
3. SAG W/ SILTATION	1	0.80
4. COMPRESSED COUPLING	20	24 00
5. COMPRESSED PIPE	29	7 40
6. BACKFILL IN PIPE	9	7.40
7. SEPARATION AT COUPLING	1	0.80
8 RIP IN PIPE	. 5	4.10
O COMPRESED PANEL	0	0.00
10 COMPRESSED INDESTIGED		
10. COMPRESSED AND STELLED	0	0.00
10. COMPRESSED AND SILTED PANEL V. OUTLET PIPE WITH PROBLEM AT B: 1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED PANEL VI. OUTLET PIPE WITH PROBLEM AT E	•	
TOO TOO TOO TOO TOO TOO TOO TOO TOO	: 32	26.40
VI. OUTLET PIPE WITH PROBLEM AT E	: 32	0.00
1. SAG	U	22.30
 SAG W/ STANDING WATER 	27	- -
3. SAG W/ SILTATION	5 3	4.10
4. COMPRESSED COUPLING	3	2.50
5. COMPRESSED PIPE	1	0.80
	Ō	0.00
6. BACKFILL IN PIPE	Ŏ	0.00
7. SEPARATION AT COUPLING	0	0.00
8. RIP IN PIPE	U	CONT'ED
		COMI ED

	• •	I-75 N+S	
9. COMPRESSED PANEL	0	0.00	
10. COMPRESSED AND SILTED PANEL	0	0.00	
VII. OUTLET PIPE WITH PROBLEM AT H	: 24	19.80	
· 	0	0.00	
1. SAG	22	18.20	
2. SAG W/ STANDING WATER	7	5.80	
3. SAG W/ SILTATION	,	0.00	
4. COMPRESSED COUPLING	0	1.60	
5. COMPRESSED PIPE	2		
6. BACKFILL IN PIPE	0	0.00	
7. SEPARATION AT COUPLING	0	0.00	
	0	0.00	
	0	0.00	
9. COMPRESSED PANEL			
10. COMPRESSED AND SILTED PANEL	0	0.00	

******* SUMMARY******** ****** PAVEMENT SUBDRAIN EVALUATION ****** HEADWALL & OUTLET PIPE

ROUTE = I-75 DIRECTION = NORTH

INSP.DATE = MAY/JUNE 1991

	NUMBER	PERCENTAGE
1. CLEAN HEADWALL	22	45.00
* WITH OPEN OUTLET PIPE (> = 60% OPEN)	13	27.00
* WITH PARTIALLY OPEN OUTLET PTPE (40-60% OPEN)	1	2.00
* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	8	16.00
2. PT. COVERED HEADWALL	20	41.00
* WITH OPEN OUTLET PIPE (> = 60% OPEN)	10	20.00
* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	2	4.00
* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	8	16.00
3. COVERED HEADWALL	1	2.00
* WITH OPEN OUTLET PIPE (> = 60% OPEN)	1	2.00
* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	0	0.00
* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	0	0.00
4. PLUGGED HEADWALL	6	12.00
* WITH OPEN OUTLET PIPE (>= 60% OPEN) * WITH PARTIALLY OPEN OUTLET	1 r	2.00
* WITH PARTIALLY OPEN COINS: PIPE (40-60% OPEN) * WITH BLOCKED OUTLET PIPE	1	2.00
(< 40% OPEN)	4	8.00
5. HEADWALL & OUTLET PIPE COND: * INSPECTED HEADWALL & PIPE * FULLY IN SERVICE * PT. IN SERVICE * OUT OF SERVICE	1TION: 49 13 14 22	27.00 29.00 45.00

Note: -Fully in Service = headwall is clean with pipe > 60% open -PT. in service = clean headwall with pipe 40-60% open, or PT. covered/covered headwall with pipe < 60% open. -Out of service = Plugged headwall, or outlet with pipe < 40% open

****** SUMMARY******* ****** PAVEMENT SUBDRAIN EVALUATION ****** HEADWALL

ROUTE = I-75DIRECTION = NORTH

		NUMBER	PERCENTAGE
1.	INSPECTED HEADWALL	49	
2.	HEADWALL CONDITION: CLEAN HEADWALL PT. COVERED HEADWALL COVERED HEADWALL PLUGGED HEADWALL	22 20 1 6	45.00 41.00 2.00 12.00
3.	COVERING MATERIAL: GRAVEL OR GRAVEL + DIRT. OR DIRT.+ VEG. OR VEG. + CON. OR CON. +	19 10 11 0	39.00 20.00 22.00 0.00
4.	SCREEN: NONE OPEN PARTIALLY OPEN BLOCK	21 19 4 4	43.00 39.00 8.00 8.00
5.	RUSTED SCREEN SILTATION: NONE SLIGHTLY MODERATELY SEVERLY	43 3 0 3	88.00 6.00 0.00 6.00
6	FLOW : YES NO	42 7	86.00 14.00
7	DRAINAGE: GOOD POOR	31 18	63.00 37.00

****** SUMMARY ******* ****** PAVEMENT SUBDRAIN EVALUATION ****** ***** OUTLET PIPE *****

ROUTE = I-75 DIRECTION = NORTH

INDE-DATE			
	NUMBER	PERCENTAGE	
I. INSPECTED OUTLET PIPE	49	27 00	
II. OPEN OUTLET PIPE (>80% OPEN)	13	73 00	
III. COMPRESSED/BLOCKED OUTLET PIPE	36	24.00	
* 60% - 80% OPEN	12	24.00	
* 40% - 60% OPEN	4	41.00	
I. INSPECTED OUTLET PIPE II. OPEN OUTLET PIPE (>80% OPEN) III. COMPRESSED/BLOCKED OUTLET PIPE * 60% - 80% OPEN * 40% - 60% OPEN * < 40 % OPEN OR BLOCKED	20	41.00	
IV. OUTLET PIPE WITH PROBLEM AT/NEA HEADWALL (AT A) 1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED PANEL	R OUTLET/		
IV. OUTLET PIPE WITH PRODUCE MITTER	36	73.00	
HEADWALL (AT A)	10	20.00	
1. SAG	12	24.00	
2. SAG W/ STANDING WATER	7	14.00	
3. SAG W/ SILTATION	10	20.00	
4. COMPRESSED COUPLING	10	16 00	
5. COMPRESSED PIPE	8	10.00	
6. BACKFILL IN PIPE	5	2 00	
7. SEPARATION AT COUPLING	1	4.00	
8. RIP IN PIPE	2	4.00	
9. COMPRESSED PANEL	0	0.00	
10. COMPRESSED AND SILTED		0.00	
PANEL	0	0.00	
V. OUTLET PIPE WITH PROBLEM AT B 1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED		76.00	
V. OUTLET PIPE WITH PROBLEM AT B	: 37	76.00	
1. SAG	0	0.00	
2. SAG W/ STANDING WATER	19	39.00	
3. SAG W/ SILTATION	9	18.00	
A COMPRESSED COUPLING	0	0.00	
5 COMPRESSED PIPE	15	31.00	
6 BACKETTI IN PIPE	4	8.00	
7 SERARATION AT COUPLING	0	0.00	
O DID IN DIDE	2	4.00	
O COMPRESED DANET.	0	0.00	
10 COMPRESED AND STLTED			
9. COMPRESSED PAREL 10. COMPRESSED AND SILTED PANEL	0	0.00	
TOOL TOOL THE	: 8	16.00	
VI. OUTLET PIPE WITH PROBLEM AT E	0	0.00	
1. SAG		12.00	
2. SAG W/ STANDING WATER	6	4.00	
3. SAG W/ SILTATION	2	0.00	
4. COMPRESSED COUPLING	0	0.00	
5. COMPRESSED PIPE	0	0.00	
6. BACKFILL IN PIPE	0		
7. SEPARATION AT COUPLING	0	0.00	
8. RIP IN PIPE	0	0.00	
		CONT'ED	

		I-75 N	
9. COMPRESSED PANEL	0	0.00	
10. COMPRESSED AND SILTED PANEL	0	0.00	
VII. OUTLET PIPE WITH PROBLEM AT F: 1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED	7 0 6 0 0 1 0 0	14.00 0.00 12.00 0.00 0.00 2.00 0.00 0.00	
PANEL	0	0.00	

****** PAVEMENT SUBDRAIN EVALUATION ****** *** ALL INSPECTED HEADWALL ***

ROUTE = I-75 DIRECTION = NORTH

MILEPOST	OUTLET PE/LOC./COND	COVER MATR.	SCREEN	SI	LT. FLO	W DRA	AINAGE
TYI	PE/LOC./COND H / PT.COV. H / CLEAN H / PT.COV. H / COVER. H / CLEAN B / CLEAN H / PT.COV.	G G G G G G G G G G G G G G G G G G G	NONE OPEN PT.OPEN NONE OPEN NONE NONE NONE OPEN BLOCK OPEN BLOCK OPEN NONE OPEN NONE NONE NONE NONE NONE	RUSTED	NONE NONE NONE NONE NONE NONE NONE NONE	YES	GOOD GOOD GOOD GOOD GOOD GOOD GOOD GOOD
162.130 S-	-H / PT.COV. -H / PT.COV.	G G	NONE OPEN	RUSTED	NONE NONE	YES	GOOD
164.610 S	-H / PT.COV. -H / CLEAN	G	OPEN OPEN	RUSTED RUSTED	NONE NONE	YES YES	POOR GOOD
166.440 S	-H / CLEAN -H / PT.COV. -H / CLEAN	G/D/V	PT.OPEN		NONE NONE	YES YES	GOOD
168.360 S	-H / PLUGGED -B / CLEAN	G+D	BLOCK OPEN	RUSTED RUSTED	NONE NONE	NO YES	POOR GOOD
170.430 S	-H / CLEAN	G+V	OPEN	RUSTED	NONE NONE	YES YES	GOOD POOR
	-B / CLEAN -H / CLEAN		NONE OPEN		NONE	YES	GOOD ONT'ED
						C	עני באנט

..I-75 N

173.250 174.300 175.440 176.070 177.340 178.210 179.050	S-H / CLEAN S-H / PT.COV. S-H / PLUGGED S-H / CLEAN S-H / PT.COV. S-H / PLUGGED S-H / PT.COV.	V G/D/V D D D+V	OPEN	RUSTED	NONE SLIGHT SEV. NONE SEV. SEV. SLIGHT	YES YES NO YES NO NO YES	GOOD POOR POOR GOOD POOR POOR
---	---	-----------------------------	------	--------	--	--	--

NOTE : COVER MATR --> G=GRAVEL; D=DIRT.; V=VEG.; C=CONCRETE

ROUTE = I-75 DIRECTION = NORTH HEADWALL = CLEAN

MILEPOST	OUTLET TYPE/LOC.	SCR	EEN	SILT.	FLOW	DRAINAGE
122.020 133.100 134.100 137.247 138.300 142.725 146.500 147.480 150.430 152.290 153.300 156.080 158.630 159.090 165.039 167.560 169.700 170.430 171.540 172.210	S-H S-H S-B S-H S-H S-H S-H S-H S-H S-H S-H S-H S-H	OPEN OPEN NONE NONE OPEN NONE NONE NONE	RUSTED RUSTED RUSTED RUSTED RUSTED	NONE NONE NONE	YES	GOOD GOOD GOOD POOR GOOD GOOD GOOD POOR GOOD
173.250 176.070	S-H S-H	OPEN NONE	RUSTED	NONE NONE	YES	

NUMBER OF CLEAN HEADWALL = 22 % OF CLEAN HEADWALL = 44.9

ROUTE = I-75 DIRECTION = NORTH

HEADWALL = PT. COVER./COVER.

MILEPOST	LOC./	COVER MATER	-	REEN	SILT.	FLOW	DRAINAGE
120.000 122.500 132.100 136.100 139.300 145.000 148.150 149.090 151.390 154.800 155.900 157.270 160.860 161.280	TYPE S-H S-H S-H S-H S-H S-H S-H S-H S	MATER G/D/V G/D/V G/D/V G/D/V G G G G G G C G G G G G G G G G G G G	NONE PT.OPEN NONE NONE PT.OPEN OPEN OPEN NONE NONE OPEN NONE OPEN NONE OPEN NONE	RUSTED RUSTED RUSTED RUSTED RUSTED RUSTED	NONE NONE NONE NONE NONE NONE NONE NONE	YES YES YES YES YES NO YES	GOOD GOOD GOOD GOOD POOR GOOD POOR GOOD POOR POOR POOR POOR
162.130 163.040 164.610 166.440 174.300 177.340	S-H S-H S-H S-H S-H S-H	G G G/D/V V D	NONE OPEN OPEN OPEN OPEN NONE	RUSTED RUSTED RUSTED	NONE NONE NONE SLIGHT SEV.	YES YES YES YES NO	GOOD POOR GOOD POOR POOR

NOTE : COVER MATR. --> G=GRAVEL; D= DIRT., V=VEG.; C=CONCRETE

NUMBER OF PT.COVERED HEADWALL = 20 % OF PT. COVERED HEADWALL = 40.8 NUMBER OF COVERED HEADWALL = 1 % OF COVERED HEADWALL = 2.0

ROUTE = I-75 DIRECTION = NORTH

INSP.DATE = MAY/JUNE 1991

HEADWALL = PLUGGED

MILEPOST	LOC./	COVER MATER	-	SCREEN	SILT.	FLOW	DRAINAGE
140.867 141.278 143.000 168.360 175.440 178.210	S-H S-H S-H S-H S-H S-H	G G+V G G+D G/D/V D	BLOCK BLOCK BLOCK BLOCK NONE NONE	RUSTED RUSTED RUSTED	NONE NONE NONE NONE SEV. SEV.	YES NO NO NO NO	GOOD GOOD POOR POOR POOR POOR

NOTE : COVER MATR. --> G=GRAVEL; D= DIRT., V=VEG.; C=CONCRETE

NUMBER OF PLUGGED HEADWALL = 6 % OF PLUGGED HEADWALL = 12.2

ROUTE = I-75 DIRECTION = NORTH HEADWALL = S-H

NO SCREEN/RUSTED

MILEPOST	OUTLET	SCRI	EEN	SILT.	FLOW	DRAINAGE
120.000	PT.COVER.	NONE		NONE	YES	GOOD
132.100	COVER.	NONE		NONE	YES	GOOD
133.100	CLEAN	OPEN	RUSTED	NONE	YES	GOOD
136.100	PT.COVER.	NONE		NONE	YES	GOOD
137.247	CLEAN	NONE		NONE	YES	GOOD
139.300	PT.COVER.	PT.OPEN	RUSTED	NONE	YES	POOR
140.867	PLUGGED	BLOCK	RUSTED	NONE	YES	GOOD
142.725	CLEAN	OPEN	RUSTED	NONE	YES	GOOD
143.000	PLUGGED	BLOCK	RUSTED	NONE	ИО	POOR
145.000	PT.COVER.	OPEN	RUSTED	NONE	YES	GOOD
146.500	CLEAN	NONE		NONE	YES	GOOD
147.480	CLEAN	OPEN	RUSTED	NONE	YES	GOOD
148.150	PT.COVER.	OPEN	RUSTED	NONE	NO	POOR
149.090	PT.COVER.	NONE		NONE	YES	POOR
150.430	CLEAN	NONE		NONE	YES	GOOD
151.390	PT.COVER.	NONE		NONE	YES	GOOD
152.290	CLEAN	NONE		HONE	YES	GOOD
153.300	CLEAN	NONE		NONE	YES	GOOD
154.800	PT.COVER.	OPEN	RUSTED	NONE	YES	POOR
155.900	PT.COVER.	NONE		SLIGHT	YES	POOR
157.270	PT.COVER.	OPEN	RUSTED	NONE	YES	POOR
158.630	CLEAN	NONE		NONE	YES	GOOD
159.090	CLEAN	NONE		NONE	YES	POOR
160.860	PT.COVER.	NONE		NONE	YES	POOR
161.280	PT.COVER.	OPEN	RUSTED	NONE	YES	GOOD
162.130	PT.COVER.	NONE		NONE	YES	POOR
163.040	PT.COVER.	OPEN	RUSTED	NONE	YES	GOOD
164.610	PT.COVER.	OPEN	RUSTED	NONE	YES	POOR GOOD
165.039	CLEAN	OPEN	RUSTED	NONE	YES YES	GOOD
166.440	PT.COVER.	PT.OPEN	RUSTED	NONE	YES	GOOD
167.560	CLEAN	NONE		NONE	NO	POOR
168.360	PLUGGED	BLOCK	RUSTED	NONE	YES	GOOD
169.700	CLEAN	OPEN	RUSTED	NONE	YES	GOOD
170.430	CLEAN	OPEN	RUSTED	NONE	YES	POOR
171.540	CLEAN	NONE		NONE	YES	GOOD
173.250	CLEAN	OPEN	RUSTED	NONE	NO	POOR
175.440	PLUGGED	NONE		SEV. NONE	YES	GOOD
176.070	CLEAN	NONE		SEV.	NO	POOR
177.340	PT.COVER.	NONE		SEV.	NO	POOR
178.210	PLUGGED	NONE		3EV•		

NUMBER OF HEADWALL W/ NO OR RUSTED SCREEN = 40 81.6

** ALL INSPECTED OUTLET PIPE **

ROUTE = I-75 DIRECTION = NORTH INSP. DATE= MAY/JUNE 1991

						REMARK	
MILEPOST PIPE		PIPE	CONDITI	ON AT		KEPPRO	
MILEPOST PIPE TYPE	A	В	C	ט ב			
					2	PIPE OPEN PIPE OPEN BLOCKED AT 5.0 PIPE OPEN PIPE OPEN	
120.000 FLEX.		2 . 5		2	2	PIPE OPEN	
122.020 FLEX.	2.2.5	2+3		_	-	PIPE OPEN BLOCKED AT 5.0 PIPE OPEN	
122.500 FLEX.	2+3+5				2	PIPE OPEN	
132.100 FLEX.	•	2			-	PIPE OPEN	
133.100 FLEX. 133.100 FLEX. 134.100 RIGID	<u>+</u>	2				PIPE OPEN	
134.100 RIGID	5	2				PIPE OPEN	
134.100 RIGID 136.100 FLEX.	2+3	2				20-40 % OPEN AT	5.0
137.247 FLEX.	1+4	5				BLOCKED AT 4.0	
137.247 FLEX. 138.300 FLEX. 139.300 FLEX.	2	2+0+0				BLOCKED AT 4.0	
				2	2	40-60 % OPEN AT1	0.0
140.867 FLEX.	4+6	3		2		10-20 % OPEN AT	6.0
141.278 FLEX.	1+4	5				40-60 % OPEN AT	5.0
140.867 FLEX. 141.278 FLEX. 142.725 FLEX. 143.000 FLEX. 145.000 FLEX. 146.500 FLEX. 147.480 FLEX. 148.150 FLEX. 149.090 FLEX. 150.430 FLEX.	2	5				0 % OPEN AT	2.0
143.000 FLEX.	2+3+4+5	_				PIPE OPEN	
145.000 FLEX.	3	3				60-80 % OPEN	
146.500 FLEX.	5	3		•		PIPE OPEN	
147.480 FLEX.	1	2		2		BLOCKED AT 2.5	
148.150 FLEX.		5+6				PIPE OPEN	
149.090 FLEX.	2+3	3		_		60-80 % OPEN	
150.430 FLEX.	1	3 -		3		20-40 % OPEN AT1	0 0
						BLOCKED AT 1.0	
152.290 FLEX. 153.300 FLEX.	1+6+8					BLOCKED AT 1.0	
153.300 FLEX.	1	2+5				BLOCKED AT 5.0	
154.800 FLEX. 155.900 FLEX. 156.080 FLEX.	5+6+8			_	_	BLOCKED AT 2.0	
155.900 FLEX.		2+5		2	2	PIPE OPEN	2 0
156.080 FLEX.	4	5				20-40 % OPEN AT	1.0
157.270 FLEX.	4					40-60 % OPEN AT	1.0
156.080 FLEX. 157.270 FLEX. 158.630 FLEX. 159.090 FLEX. 160.860 FLEX. 161.280 FLEX. 162.130 FLEX. 163.040 FLEX. 164.610 FLEX. 165.039 FLEX. 166.440 FLEX. 167.560 FLEX. 167.560 FLEX. 168.360 FLEX. 169.700 FLEX.		2+3+6-	+8			PIPE OPEN 20-40 % OPEN AT 40-60 % OPEN AT BLOCKED AT23. 20-40 % OPEN AT PIPE OPEN 20-40 % OPEN AT 60-80 % OPEN PIPE OPEN 40-60 % OPEN AT BLOCKED AT 6.0 60-80 % OPEN 60-80 % OPEN	. 0
159.090 FLEX.	4	5				20-40 % OPEN AT	2.0
160.860 FLEX.		2+3				PIPE OPEN	4 0
161.280 FLEX.	2	5				20-40 % OPEN AT	4.0
162.130 FLEX.	2	5				60-80 % OPEN	
163.040 FLEX.		2				PIPE OPEN	2 0
164.610 FLEX.	5	5				40-60 % OPEN AT	2.0
165.039 FLEX.	4	2				BLOCKED AT 6.0	
166 440 FLEX.	_	2				60-80 % OPEN	
167.560 FLEX.		2				60-80 % OPEN	
168.360 FLEX.	2	2		3		00-00 0 01-11	
169.700 FLEX.	1+4	5				60-80 % OPEN	
170.430 FLEX.	2+5					60-80 % OPEN	
171.540 FLEX.					5	60-80 % OPEN	
172.210 FLEX.		2				60-80 % OPEN	
173.250 FLEX.	2	2		2	2	60-80 % OPEN	
174.300 FLEX		_				10-20 % OPEN AT	1.5
175.440 FLEX						BLOCKED AT 1.0	
176.070 RIGII						PIPE OPEN	
177.340 RIGII	6					BLOCKED AT 2.0	
178.210 FLEX	. 6					BLOCKED AT 1.5	
179.050 FLEX	. 1	2				60-80 % OPEN	
1/9:000 1222	 						
NIMBER OF	OPEN OF	JTLET P	IPE		=	13	

= 13= 27NUMBER OF OPEN OUTLET PIPE % OF OPEN OUTLET PIPE NUMBER OF COMPRESSED/BLOCKED OUTLET PIPE = 36 % OF COMPRESSED/BLOCKED OUTLET PIPE

** OPEN OUTLET PIPE **

ROUTE = I-75

DIRECTION = NORTH

INSP.DATE = MAY/JUNE 1991

MILEPOST	PIPE TYPE	A	PIPE B	CONDIT	ION D	TA	E 	F	REMARK
120.000 122.020 132.100 133.100 134.100 136.100 145.000 147.480 149.090 155.900 160.860 163.040	FLEX. FLEX. RIGID FLEX. FLEX. FLEX. FLEX. FLEX. FLEX. FLEX. FLEX.	5 2+3 3 1 2+3	2 2+5 2 2 2 3 2 3 2+5 2+3 2				2 2 2	2 2 2	

NUMBER OF OPEN OUTLET PIPE = 13 % OF OPEN OUTLET PIPE = 26.5

* COMPRESSED/BLOCKED OUTLET PIPE *

ROUTE = I-75 DIRECTION = NORTH

INSP.DATE = MAY/JUNE 1991

								DEMARK
MILEPOST	PIPE		PIPE	CONDIT	іои	AT	177	REMARK
	TYPE	A	В	C	D		r 	
122.500	TTEY.	2+3+5						BLOCKED AT 5.0
122.500 137.247 138.300 139.300 140.867	FLEY.	1+4	5					20-40 % OPEN AT 5.0
138.300	FLEX.	2	5+6+8					BLOCKED AT 4.0
139.300	FLEX.	2+3+7	5+6					BLOCKED AT 4.0
140.867	FLEX.	4+6	3			2	2	40-60 % OPEN AT10.0
1/11 770	TT TV	1 1 1	_					10-20 % OPEN AT 6.0
142.725	FLEX.	2	5					40-60 % OPEN AT 5.0
143.000	FLEX.	2+3+4+5						0 % OPEN AT 2.0
146.500	FLEX.	5	3					60-80 % OPEN
148.150	FLEX.		5+6					BLOCKED AT 2.5
150.430	FLEX.	1	3			3		60-80 % OPEN
151.390	FLEX.	1	3					20-40 % OPEN AT10.0
152 290	FLEX.	1+6+8						BLOCKED AT 1.0
153.300	FLEX.	1	2+5					BLOCKED AT 5.0
154.800	FLEX.	5+6+8						BLOCKED AT 2.0
156.080	FLEX.	4	5					20-40 % OPEN AT 2.0
157.270	FLEX.	4						40-60 % OPEN AT 1.0
158.630	FLEX.		2+3+6	+8				BLOCKED AT23.0 20-40 % OPEN AT 2.0
159.090	FLEX.	4	5					20-40 % OPEN AT 2.0
161.280	FLEX.	2	5					20-40 % OPEN AT 4.0
162.130	FLEX.	2	5					60-80 % OPEN 40-60 % OPEN AT 2.0
164.610	FLEX.	5	5					BLOCKED AT 6.0
165.039	FLEX.	2 2 5 4	2					60-80 % OPEN
166.440	FLEX.		2					60-80 % OPEN
167.560	FLEX.	2 1+4	2			3		60-80 % OPEN
168.360	FLEX.	2	2			3		60-80 % OPEN
169.700	FLEX.	1+4	5					60-80 % OPEN
170.430	FLEX.	2+5	2+3				5	60-80 % OPEN
171.540	FLEX.	_	2+3				5	60-80 % OPEN
172.210	FLEX.	3	2			2	2	60-80 % OPEN
172.210 173.250	FLEX.	2	2			4	2	10-20 % OPEN AT 1.5
174.300								BLOCKED AT 1.0
175.440								BLOCKED AT 2.0
177.340								BLOCKED AT 1.5
178.210			2					60-80 % OPEN
1/9.050		1						

NUMBER OF BLOCKED/COMPRESSED OUTLET PIPE = 36 % OF BLOCKED/COMPRESSED OUTLET PIPE = 73.5

******* SUMMARY******** ****** PAVEMENT SUBDRAIN EVALUATION ****** HEADWALL & OUTLET PIPE

ROUTE = I-75 DIRECTION = SOUTH

INSP.DATE = MAY/JUNE 1991

		NUMBER	PERCENTAGE
 1.	CLEAN HEADWALL	20	28.00
	* WITH OPEN OUTLET PIPE (> = 60% OPEN)	11	15.00
	* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	2	3.00
	* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	7	10.00
2.	PT. COVERED HEADWALL	30	42.00
	* WITH OPEN OUTLET PIPE (> = 60% OPEN)	20	28.00
	* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	3	4.00
	* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	7	10.00
3.	COVERED HEADWALL	10	14.00
	* WITH OPEN OUTLET PIPE (> = 60% OPEN)	5	7.00
	* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	1	1.00
	* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	4	6.00
4.	PLUGGED HEADWALL	12	17.00
	* WITH OPEN OUTLET PIPE (>= 60% OPEN)	6	8.00
	* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	0	0.00
	* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	6	8.00
5.	HEADWALL & OUTLET PIPE CONDI	TION :	
	* INSPECTED HEADWALL & PIPE * FULLY IN SERVICE * PT. IN SERVICE	72 11 31	15.00 43.00
	* OUT OF SERVICE	30	42.00

Note: -Fully in Service = headwall is clean with pipe > 60% open -PT. in service = clean headwall with pipe 40-60% open, or PT. covered/covered headwall with pipe < 60% open. -Out of service = Plugged headwall, or outlet with pipe <

40% open

******* SUMMARY******* ******* PAVEMENT SUBDRAIN EVALUATION ****** HEADWALL

ROUTE = I-75 DIRECTION = SOUTH

	NUMBER	PERCENTAGE
1. INSPECTED HEADWALL	72	
2. HEADWALL CONDITION: CLEAN HEADWALL PT. COVERED HEADWALL COVERED HEADWALL PLUGGED HEADWALL	20 30 10 12	28.00 42.00 14.00 17.00
3. COVERING MATERIAL: GRAVEL OR GRAVEL + DIRT. OR DIRT.+ VEG. OR VEG. + CON. OR CON. +	21 35 38 1	29.00 49.00 53.00 1.00
4. SCREEN: NONE OPEN PARTIALLY OPEN BLOCK	16 24 16 16	22.00 33.00 22.00 22.00
RUSTED SCREEN	23	32.00
5. SILTATION: NONE SLIGHTLY MODERATELY SEVERLY	59 4 6 3	82.00 6.00 8.00 4.00
6. FLOW : YES NO	60 12	83.00 17.00
7. DRAINAGE : GOOD POOR	45 27	63.00 38.00

****** SUMMARY ******* ****** PAVEMENT SUBDRAIN EVALUATION ****** ***** OUTLET PIPE *****

ROUTE = I-75 DIRECTION = SOUTH

	NUMBER	PERCENTAGE
I. INSPECTED OUTLET PIPE II. OPEN OUTLET PIPE (>80% OPEN) III. COMPRESSED/BLOCKED OUTLET PIPI * 60% - 80% OPEN * 40% - 60% OPEN * < 40 % OPEN OR BLOCKED	72	
TT OPEN OUTLET PIPE (>80% OPEN)	18	25.00
TIT COMPRESED/RIOCKED OUTLET PIPI	₹ 54	75.00
III. COMPRESSED/ DEOCRED COIDER 1221	24	33.00
* 608 - 608 OPEN	-6	8.00
* 40% - 60% OPEN	21	33.00
* < 40 % OPEN OR BLOCKED	24	
IV. OUTLET PIPE WITH PROBLEM AT/NE	AR OUTLET/	00.00
HEADWALL (AT A)	60	83.00
1 SAG	9	13.00
2 SAG W/ STANDING WATER	20	28.00
2. SAG W/ SIMBING WILLIAM	9	13.00
4. COMPRECED COURTING	20	28.00
4. COMPRESSED COOFFIING	17	24.00
5. COMPRESSED PIPE	13	18.00
6. BACKFILL IN PIPE	3	4.00
7. SEPARATION AT COUPLING	5	7.00
8. RIP IN PIPE	5 1	1 00
9. COMPRESSED PANEL	.T	1.00
10. COMPRESSED AND SILTED	· <u>-</u>	0.00
IV. OUTLET PIPE WITH PROBLEM AT/NEX HEADWALL (AT A) 1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED PANEL	0	0.00
V. OUTLET PIPE WITH PROBLEM AT B 1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED	: 46	64.00
1 986	5	7.00
2 CAC W/ STANDING WATER	23	32.00
2. SAG W/ SIMPLING MILLS	11	15.00
3. SAG W/ SILIATION	1	1.00
4. COMPRESSED COUPLING	1 4	19.00
5. COMPRESSED PIPE	5	7.00
6. BACKFILL IN PIPE	1	1.00
7. SEPARATION AT COUPLING		4.00
8. RIP IN PIPE	<u>ى</u> 0	0.00
9. COMPRESSED PANEL	U	0.00
10. COMPRESSED FAREL 10. COMPRESSED AND SILTED DANEL	_	0.00
PANEL	0	0.00
VI. OUTLET PIPE WITH PROBLEM AT E	: 24	33.00
1. SAG	0	0.00
_ · · · · · · · · · · · · · · · · · · ·	21	29.00
	3	4.00
	3	4.00
4. COMPRESSED COUPLING	1	1.00
5. COMPRESSED PIPE	Ō	0.00
6. BACKFILL IN PIPE	0	0.00
7. SEPARATION AT COUPLING		0.00
8. RIP IN PIPE	0	CONT'ED
		COMI ED

9. COMPRESSED PANEL 10. COMPRESSED AND SILTED PANEL 0 0.00 VII. OUTLET PIPE WITH PROBLEM AT F: 17 24.00 1. SAG 2. SAG W/ STANDING WATER 16 22.00 3. SAG W/ SILTATION 7 10.00 4. COMPRESSED COUPLING 0 0.00 5. COMPRESSED PIPE 1 1.00 6. BACKFILL IN PIPE 0 0.00 7. SEPARATION AT COUPLING 0 0.00 8. RIP IN PIPE 0 0.00			I-75 S
PANEL 0 0.00 VII. OUTLET PIPE WITH PROBLEM AT F: 17 24.00 1. SAG 0 0.00 2. SAG W/ STANDING WATER 16 22.00 3. SAG W/ SILTATION 7 10.00 4. COMPRESSED COUPLING 0 0.00 5. COMPRESSED PIPE 1 1.00 6. BACKFILL IN PIPE 0 0.00 7. SEPARATION AT COUPLING 0 0.00 8. RIP IN PIPE 0 0.00		0	0.00
1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 10.00 0.00 0.00 0.00 0.00		0 .	0.00
1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 10.00 10.00 10.00 10.00 10.00 10.00 10.00	VII OUTLET PIPE WITH PROBLEM AT F :	17	24.00
2. SAG W/ STANDING WATER 16 22.00 3. SAG W/ SILTATION 7 10.00 4. COMPRESSED COUPLING 0 0.00 5. COMPRESSED PIPE 1 1.00 6. BACKFILL IN PIPE 0 0.00 7. SEPARATION AT COUPLING 0 0.00 8. RIP IN PIPE 0 0.00	· ·		0.00
3. SAG W/ SIANDING WAILN 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. 0.00 10.00 0.00 0.00 0.00		16	22.00
4. COMPRESSED COUPLING 0 0.00 5. COMPRESSED PIPE 1 1.00 6. BACKFILL IN PIPE 0 0.00 7. SEPARATION AT COUPLING 0 0.00 8. RIP IN PIPE 0 0.00			
5. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 1.00 0.00 0.00 0.00	• • • •		_
6. BACKFILL IN PIPE 0 0.00 7. SEPARATION AT COUPLING 0 0.00 8. RIP IN PIPE 0 0.00	- · · · · · · · · · · · · · · · · · · ·	1	
7. SEPARATION AT COUPLING 0 0.00 8. RIP IN PIPE 0 0.00		, T	
8. RIP IN PIPE 0 0.00		0	
8. RIP IN PIPE	7. SEPARATION AT COUPLING	0	
0.00	8. RIP IN PIPE		
9. COMPRESSED PANEL	9. COMPRESSED PANEL	0	0.00
10. COMPRESSED AND SILTED			
PANEL 0 0.00	 	0	0.00

****** PAVEMENT SUBDRAIN EVALUATION ****** *** ALL INSPECTED HEADWALL ***

ROUTE = I-75 DIRECTION = SOUTH

MILEPOST	OUTL	LET	COVER	SCREEN	SI	LT. FLO	OW DRA	AINAGE
	TYPE/LOC	C./COND	MATR.					
119.150	S-B / C	LEAN		_	RUSTED	NONE	YES	GOOD
119.300	S-H / P'			OPEN		NONE	YES	GOOD
119.600	S-H / P'	T.COV.		PT.OPEN		NONE	YES	POOR
119.850	S-H / C			BLOCK		NONE	YES	POOR POOR
120.500	S-H / P			OPEN		NONE	YES	
120.650	S-H / P		_	OPEN		NONE	YES	POOR POOR
120.870	S-H / C	LEAN		OPEN		NONE	YES	
120.980	S-H / P			PT.OPEN		NONE	YES	GOOD
121.230	S-H / C	LEAN		OPEN		NONE	YES	GOOD GOOD
121.500	S-H / P			OPEN		NONE	YES YES	GOOD
121.700	S-H / C	OVER.	D +V	BLOCK		NONE	YES	POOR
121.810	S-H / P			PT.OPEN		NONE NONE	YES	POOR
122.010	S-H / P			PT.OPEN		NONE	YES	GOOD
122.270	S-H / C			OPEN		NONE	YES	GOOD
122.670	S-H / P		D+V	PT.OPEN		NONE	YES	GOOD
122.900	S-H / P			PT.OPEN		NONE	YES	GOOD
123.200	S-H / C			BLOCK		NONE	YES	GOOD
123.650	S-B / C			NONE	RUSTED	NONE	YES	GOOD
125.900	S-H / P		D+V	OPEN	RUSTED	NONE	YES	POOR
126.990	S-H / P		Ā	OPEN	RUSTED	NONE	YES	GOOD
127.800	S-H / P		V (D (V	OPEN BLOCK	KUSTED	NONE	NO	POOR
128.800	S-H / P			PT.OPEN		MOD.	YES	POOR
129.920		COVER.	G+D	BLOCK		NONE	NO	GOOD
130.990		LUGGED	G+V	BLOCK		NONE	NO	POOR
131.250	•	LUGGED	G+V	OPEN		MOD.	YES	POOR
132.700	·	PT.COV.	D	OPEN		NONE	YES	GOOD
133.980		CLEAN	7.7	PT.OPEN	משייבוזם	MOD.	NO	POOR
134.900		PT.COV.	V	OPEN	RODILD	NONE	YES	GOOD
135.800	-	CLEAN	C	PT.OPEN	RUSTED	NONE	YES	GOOD
136.300	· .	PT.COV.	G V	PT.OPEN		NONE	YES	POOR
137.900		PT.COV.		BLOCK	KODILD	NONE	NO	GOOD
138.130		PLUGGED		BLOCK		NONE	ИО	GOOD
139.800		PLUGGED	G/D/V	OPEN	RUSTED	NONE	YES	GOOD
141.180	•	CLEAN	D +V	BLOCK	RUSTED	NONE	YES	GOOD
143.630		PLUGGED	G/D/V			SLIGHT		POOR
144.200		PT.COV.	G/D/V	NONE	2.00220	MOD.	YES	GOOD
145.847	· · · · · · · · · · · · · · · · · · ·	PT.COV.	G+V	NONE		NONE	YES	POOR
146.840	· .	PT.COV.	G∓V V	NONE		MOD.	YES	POOR
147.900		PT.COV.	٧	NONE		NONE	YES	GOOD
148.153		CLEAN	G	BLOCK	RUSTED	NONE	YES	GOOD
149.672	S-H / (COVER.	G				C	ONT'ED

.. I-75 S

153.900 S-H / PT.COV. G OPE 154.810 S-H / PT.COV. G/D/C PT. 155.160 S-H / PT.COV. D NOT 155.460 S-H / PT.COV. D NOT 156.960 S-H / PT.COV. D+V OPE 157.710 S-H / COVER. G/D/V BLG 159.930 S-H / CLEAN OPE 160.200 S-H / CLEAN OPE 161.540 S-H / CLEAN OPE 162.750 S-H / PT.COV. V PT 163.590 S-H / CLEAN OPE 164.690 S-H / CLEAN OPE 164.690 S-H / CLEAN OPE 165.540 S-H / PT.COV. G/D/V PT 166.700 S-H / CLEAN OPE 167.470 S-H / CLEAN OPE 169.850 S-H / PT.COV. D+V PT 169.850 S-H / PT.COV. G-D PT 170.850 S-H / PT.COV. D+V PT 170.850 S-H / PT.COV. D+V PT 171.730 S-H / COVER. D+V BL 171.730 S-H / COVER. D+V BL 172.630 S-H / PT.COV. D+V OP 173.430 S-H / CLEAN NO 174.740 S-H / CLEAN D+V NO 175.740 S-H / PLUGGED G/D/V NO 175.740 S-H / PLUGGED G/D/V NO 176.890 S-H / PT.COV. V NO	SEV. YES GOOD CCK RUSTED NONE NO GOOD CCK NONE YES GOOD CCK NONE YES GOOD CCK NONE YES GOOD NE NONE YES GOOD NE NONE YES GOOD CCK RUSTED NONE YES GOOD CCK RUSTED NONE NO GOOD CCK RUSTED NONE NO POOR EN NONE YES GOOD NO SEV. YES POOR NE NONE YES GOOD NO NONE YES GOOD NO NONE YES GOOD COPEN NONE YES GOOD COPEN NONE YES GOOD COCK RUSTED SEV. YES POOR COCK RUSTED SEV. YES POOR COCK RUSTED NONE YES GOOD
--	---

NOTE : COVER MATR --> G=GRAVEL; D=DIRT.; V=VEG.; C=CONCRETE

ROUTE = I-75 DIRECTION = SOUTH HEADWALL = CLEAN

MILEPOST	OUTLET TYPE/LOC.	SCR	EEN	SILT.	FLOW	DRAINAGE
119.150 120.870 121.230 122.270 123.650 133.980 135.800 141.180 148.153 150.870 159.930 160.200 161.540 163.590 164.690 166.700 167.470 173.430 177.630	S-B S-H S-H S-H S-H S-H S-H S-H S-H S-H S-H	NONE OPEN OPEN OPEN OPEN OPEN OPEN OPEN	RUSTED RUSTED RUSTED	NONE NONE NONE NONE NONE SLIGHT		GOOD GOOD GOOD GOOD POOR GOOD GOOD GOOD GOOD
179.690	S-H	OPEN		SLIGHT	YES	

NUMBER OF CLEAN HEADWALL = 20 % OF CLEAN HEADWALL = 27.8

ROUTE = I-75DIRECTION = SOUTH

HEADWALL = PT. COVER./COVER.

MILEPOST	LOC./ TYPE	COVER MATER		EEN	SILT.	FLOW	DRAINAGE
119.300 119.600 119.850 120.980 121.500 121.700 121.810 122.010 122.670 122.900 123.200 125.900 126.990 127.800 129.920 132.700 134.900 136.300 137.900 144.200 145.847	TYPE	MATER G/D/V D+V G/D/V G/D/V G/D/V G/D/V G/D/V D+V G/D/V C/D/V D+V V C-D	OPEN PT.OPEN BLOCK PT.OPEN OPEN BLOCK PT.OPEN PT.OPEN PT.OPEN PT.OPEN OPEN OPEN OPEN OPEN PT.OPEN	RUSTED RUSTED RUSTED RUSTED RUSTED RUSTED RUSTED RUSTED	NONE NONE NONE NONE NONE NONE NONE NONE	YES	GOOD POOR GOOD GOOD GOOD GOOD GOOD GOOD GOOD G
144.200 145.847 146.840 147.900 149.672 151.280	S-H S-H S-H S-H S-H S-H	G/D/V G/D/V G+V V G	PT.OPEN NONE NONE NONE BLOCK NONE	RUSTED	SLIGHT MOD. NONE MOD. NONE SEV.	YES	POOR GOOD
145.847 146.840 147.900 149.672	S-H S-H S-H S-H	G/D/V G+V V G	NONE NONE BLOCK		MOD. NONE MOD. NONE	YES YES YES YES YES	GOOD POOR POOR GOOD GOOD
153.900 155.160 155.460 156.960 157.710	S-H S-H S-H S-H S-H	G G+D+C D D+V G/D/V	NONE OPEN	RUSTED RUSTED RUSTED RUSTED	NONE NONE NONE NONE NONE	YES YES YES NO	GOOD GOOD GOOD GOOD

NOTE : COVER MATR. --> G=GRAVEL; D= DIRT., V=VEG.; C=CONCRETE

NUMBER OF PT.COVERED HEADWALL = 30 % OF PT. COVERED HEADWALL = 41.7 NUMBER OF COVERED HEADWALL = 10 % OF COVERED HEADWALL = 13.9

ROUTE = I-75 DIRECTION = SOUTH HEADWALL = PLUGGED

	LOC./ TYPE	COVER		SCREEN	SILT.	FLOW	DRAINAGE
120.650 128.800 130.990 131.250 138.130 139.800 143.630 152.700 154.810 170.850	S-H S-H S-H S-H S-H S-H S-H S-H S-H S-H	G/D/V G G/D/V G+V G/D/V G/D/V D+V G/D/V G+D D+V G/D/V	OPEN OPEN BLOCK BLOCK BLOCK BLOCK BLOCK BLOCK BLOCK BLOCK BLOCK	RUSTED RUSTED	NONE NONE	YES YES NO NO NO NO NO YES NO YES YES	POOR POOR POOR GOOD GOOD GOOD GOOD GOOD GOOD FOOR

NOTE: COVER MATR.--> G=GRAVEL; D= DIRT., V=VEG.; C=CONCRETE NUMBER OF PLUGGED HEADWALL = 12 % OF PLUGGED HEADWALL = 16.7

ROUTE = I-75 DIRECTION = SOUTH HEADWALL = S-H

NO SCREEN/RUSTED

MILEPOST	OUTLET	SCR	 EEN	SILT.	FLOW	DRAINAGE
119.150	CLEAN	NONE	RUSTED	NONE	YES	GOOD
123.650	CLEAN	NONE	_	NONE	YES	GOOD
125.900	PT.COVER.	OPEN	RUSTED	NONE	YES	GOOD
126.990	PT.COVER.	OPEN	RUSTED	NONE	YES	POOR
127.800	PT.COVER.	OPEN	RUSTED	NONE	YES	GOOD
134.900	PT.COVER.	PT.OPEN	RUSTED	MOD.	ИО	POOR
136.300	PT.COVER.	PT.OPEN	RUSTED	NONE	YES	GOOD
137.900	PT.COVER.	PT.OPEN	RUSTED	NONE	YES	POOR
141.180	CLEAN	OPEN	RUSTED	NONE	YES	GOOD
141.180	PLUGGED	BLOCK	RUSTED	NONE	YES	GOOD
144.200	PT.COVER.	PT.OPEN	RUSTED	SLIGHT	YES	POOR
144.200	PT.COVER.	NONE	•••	MOD.	YES	GOOD
146.840	PT.COVER.	NONE		NONE	YES	POOR
147.900	PT.COVER.	NONE		MOD.	YES	POOR
147.900	CLEAN	NONE		NONE	YES	GOOD
149.672	COVER.	BLOCK	RUSTED	NONE	YES	GOOD
150.870	CLEAN	NONE		NONE	YES	GOOD
151.280	PT.COVER.	NONE		SEV.	YES	GOOD
152.700	PLUGGED	BLOCK	RUSTED	NONE	ИО	GOOD
153.900	PT.COVER.	OPEN	RUSTED	NONE	МО	GOOD
155.160	PT.COVER.	PT.OPEN	RUSTED	NONE	YES	GOOD
155.460	PT.COVER.	NONE		NONE	YES	GOOD
156.960	PT.COVER.	OPEN	RUSTED	NONE	YES	GOOD
157.710	COVER.	BLOCK	RUSTED	NONE	NO	GOOD
158.850	COVER.	BLOCK	RUSTED	NONE	NO	POOR
160.200	CLEAN	OPEN	RUSTED	NONE	YES	GOOD
163.590	CLEAN	OPEN	RUSTED	NONE	YES	POOR
164.690	CLEAN	NONE		NONE	YES	GOOD
168.720	PT.COVER.	PT.OPEN	RUSTED	NONE	YES	GOOD
170.850	PLUGGED	BLOCK	RUSTED	NONE	YES	GOOD
171.730	COVER.	BLOCK	RUSTED	SEV.	YES	POOR
172.630	PT.COVER.	OPEN	RUSTED	NONE	YES	POOR
173.430	CLEAN	NONE		NONE	YES	GOOD
174.740	COVER.	NONE		NONE	YES	GOOD
175.740	PLUGGED	NONE		NONE	NO	POOR
176.890	PT.COVER.	NONE		MOD.	YES	POOR
177.630	CLEAN	NONE		SLIGHT		GOOD
178.510	COVER.	NONE		SLIGHT	YES	POOR
1,0.010						

NUMBER OF HEADWALL W/ NO OR RUSTED SCREEN = 38 \$ = 52.8

** ALL INSPECTED OUTLET PIPE **

ROUTE = I-75 DIRECTION = SOUTH INSP. DATE= MAY/JUNE 1991

WITEDOCT DIDE		PIPE	CONDIT	ION	AT		REMARK
MILEPOST PIPE TYPE	Α	В	С	D	E	F	
11FE							
119.150 FLEX. 5 119.300 FLEX. 6 119.600 FLEX. 6	E 1 E T O T O						PTOCVED VI I.A
119.150 FLEX.	3 +0+ 0+3	_		5	4		20-40 % OPEN AT16.0
119.300 FLEX.	4))	_	,	•		BLOCKED AT 8.0
119.600 FLEX.	4+5	2+3+3	5				
					212	3 ± 3	BLOCKED AT 1.0 60-80 % OPEN
120.500 FLEX.	1	2+3			2+3	273	PIPE OPEN
120.650 FLEX.	4+6	3			4	2	PIPE OPEN 60-80 % OPEN
120.870 FLEX.	1+4	5			2	2	CA CA & OPEN
120.980 FLEX.	2+6+7	6+7			2	*	60-80 % OPEN
121.230 FLEX.	1+4+7	1	3				LILD OLDN
120.500 FLEX. 120.650 FLEX. 120.870 FLEX. 120.980 FLEX. 121.230 FLEX. 121.500 FLEX. 121.700 FLEX. 121.810 FLEX.	1.	1			2 2 2 2		PIPE OPEN
121.500 122	I	0.0			2		PIPE OPEN
121.700 FLEX. 121.810 FLEX. 122.010 FLEX. 122.270 FLEX. 122.670 FLEX. 123.200 FLEX. 123.650 FLEX. 125.900 FLEX. 125.900 FLEX.	2	3			2		PIPE OPEN 60-80 % OPEN PIPE OPEN
121.810 FLEX.	2	•			2		PIPE OPEN 60-80 % OPEN BLOCKED AT 3.0
122.010 FLEX.	3	2			2+4+5		60-80 % OPEN
122.270 FLEX.	1	3			21415		BLOCKED AT 3.0
122.670 FLEX.	4+5+6	4+5+6			2	2	60-80 % OPEN
122.900 FLEX.	2	3			2	2	60-80 % OPEN
123.200 FLEX.	3			3	2	4	60 00 9 OPEN
123.650 FLEX.	2+5			2	_		60-80 % OPEN 60-80 % OPEN 60-80 % OPEN PIPE OPEN 60-80 % OPEN PIPE OPEN
125.900 FLEX.	2	2			2		ATTE OPEN
126,990 FLEX.	2+5						60-80 & OPEN
125.900 FLEX. 126.990 FLEX. 127.800 FLEX. 128.800 FLEX. 129.920 FLEX. 130.990 FLEX. 131.250 FLEX. 132.700 FLEX. 133.980 FLEX. 134.900 FLEX. 135.800 FLEX. 136.300 FLEX. 137.900 FLEX. 138.130 FLEX. 139.800 FLEX. 141.180 FLEX. 143.630 FLEX.	6+8	2					PIPE OPEN
129 800 FLEX.	2+4+5+6				2+3	2+3	60-80 * OPEN
120.000 ILL		2+3					PIPE OPEN
129.920 IDEM.	Λ	1			2		PIPE OPEN
130.990 FLEX.	4 1 1	•					BLOCKED AT 2.0
131.250 FLEX.	3.7.7	2			2	2	60-80 % OPEN
132.700 FLEX.	2	2			2	2	PIPE OPEN PIPE OPEN BLOCKED AT 2.0 60-80 % OPEN 60-80 % OPEN 10-20 % OPEN AT 6.0 60-80 % OPEN 60-80 % OPEN
133.980 FLEX.	4	_			_		10-20 % OPEN AT 6.0
134.900 FLEX.		212				2+3	60-80 % OPEN
135.800 FLEX.	1+/	2+3				2+3	60-80 % OPEN 60-80 % OPEN
136.300 FLEX.	2	2			2	2	60-80 % OPEN
137.900 FLEX.	4	2			2	2	20-40 % OPEN AT 4.0
138.130 FLEX.	1	1+5					10-20 % OPEN AT 3.0
139.800 FLEX.	2	5+8					20-40 % OPEN AT 2.0
141.180 FLEX.	2+4+5+8						0 % OPEN AT 4.0
143.630 FLEX.	6	5+6					O & OPEN AT 4.0
141.180 FLEX. 143.630 FLEX. 144.200 FLEX. 145.847 FLEX.	2+3+6	5 +6				_	BLOCKED AT 5.0
145 847 FLEX.	3					2	00-00 0 OLDM
146 840 FLEX	3					2+3	60-80 % OPEN
145.847 FLEX. 146.840 FLEX. 147.900 FLEX. 148.153 FLEX.	2+3	2			2	3	60-80 % OPEN
140 153 FLEY	2	1					PIPE OPEN
140.133 FEER.	3	-					0 % OPEN AT 0.0
149.672 FLEX.	1 1 5						40-60 % OPEN AT 2.5
150.870 FLEX.	112	5+8					40-60 % OPEN AT 4.0
151.280 FLEX.		J+0					PIPE OPEN
152.700 FLEX.							PIPE OPEN
153.900 FLEX.							20-40 % OPEN AT 1.0
154.810 FLEX.	4+5						40-60 % OPEN AT 2.0
155.160 FLEX.	4+5						40-60 % OPEN AT 1.5
155.460 FLEX.	4+5				2	21215	60-80 % OPEN
156.960 FLEX.		2			2	2+3+5	0 % OPEN AT 0.0
157.710 FLEX.	5						40-60 % OPEN AT 3.0
158.850 FLEX.	2	6+8					4U-6U & OPEN AT 3.0
159.930 FLEX.		2			2		PIPE OPEN
160.200 FLEX.	4+5	5					40-60 % OPEN AT 3.0
IOO.ZOO IDDA.		-					CONT'ED

161.540 F 162.750 F 163.590 F 164.690 F 165.540 F 166.700 F 167.470 F 168.720 F 169.850 F 170.850 F 171.730 F 172.630 F 173.430 F 174.740 F 175.740 F 176.890 F 177.630 F	FLEX.	6 2 2+3 2 4 2 4 8 8 6 6 6 2	2 2 2+3 2 2 2 2+3 5	2 2 3 2	2 2 2	0 % OPEN AT 2.0 0 % OPEN AT 2.0 PIPE OPEN 60-80 % OPEN PIPE OPEN 20-40 % OPEN AT 3.5 PIPE OPEN 60-80 % OPEN PIPE OPEN 60-80 % OPEN BLOCKED AT 5.0 60-80 % OPEN BLOCKED AT 1.0 BLOCKED AT 1.0 BLOCKED AT 1.0 RLOCKED AT 1.0
177.630 1 178.510 1	FLEX. FLEX.	2	_			
179.690	RIGID		5	 		

NUMBER OF OPEN OUTLET PIPE = 18 % OF OPEN OUTLET PIPE = 25 NUMBER OF COMPRESSED/BLOCKED OUTLET PIPE = 54 % OF COMPRESSED/BLOCKED OUTLET PIPE = 75

** OPEN OUTLET PIPE **
ROUTE = 1-75
DIRECTION = SOUTH
INSP.DATE = MAY/JUNE 1991

MILEPOST		A	PIPE B	CONDIT	ION D	AT E	F	REMARK
120.650	 FLEX.	4+6	3			4		
121.230			1	3				
121.500			1					
121.700			2+3			2		
122.010						2		4 - 9
125.900			2			2		
127.800			2					
129.920			2+3					
130.990		4	1			2		
148.153			1					
152.700			-					
153.900								
			2			2		
159.930		2	2			2	2	
163.590			_			3		
165.540			2+3			2	2	
166.700			2			-	_	
168.720			2					
170.850	FLEX.	4						

NUMBER OF OPEN OUTLET PIPE = 18 % OF OPEN OUTLET PIPE = 25.0

* COMPRESSED/BLOCKED OUTLET PIPE *

ROUTE = I-75
DIRECTION = SOUTH
INSP.DATE = MAY/JUNE 1991

			CONDITION	 ბო		REMARK
MILEPOST PIPE TYPE	7	D LIBE	CONDITION	E	F	
TYPE	A.					BLOCKED AT 1.0 20-40 % OPEN AT16.0 BLOCKED AT 8.0 BLOCKED AT 1.0 60-80 % OPEN 60-80 % OPEN 60-80 % OPEN 60-80 % OPEN BLOCKED AT 3.0 60-80 % OPEN BLOCKED AT 2.0 60-80 % OPEN
110 150 FTFY 5+	6+8+9					BLOCKED AT 1.0
119.150 FLEX. 5.	01015	5	5	4		20-40 % OPEN AT16.0
119.500 FLEX. 4	-5	2+3+5	5			BLOCKED AT 8.0
110 OEO ETEV AL	.s					BLOCKED AT 1.0
120 EOO ETEV 1	· J	2+3		2+3	2+3	60-80 % OPEN
120.500 FLEX. 1	L/I	5		2	2	60-80 % OPEN
120.870 FLEA. 11	L6.17	6+7		2		60-80 % OPEN
120.980 FLEX. 21	ro+/	3		2		60-80 % OPEN
121.810 FLEX. 3		3		2+4+5		60-80 % OPEN
122.2/U FLEX. 1		J 11516				BLOCKED AT 3.0
122.670 FLEX. 44	10+0	3		2	2	60-80 % OPEN
122.900 FLEX. 2		3	3	2	2	60-80 % OPEN
123.200 FLEX. 3	. =		ິ ວ	2	-	60-80 % OPEN
123.650 FLEX. 24	+5		2			60-80 % OPEN
126.990 FLEX. 24	+5			2 + 3	2+3	60-80 % OPEN
128.800 FLEX. 2	+4+5+6			273	213	BLOCKED AT 2.0
131.250 FLEX. 4	+5	_		2	2	60-80 % OPEN
132.700 FLEX. 2		2		2	2	60-80 % OPEN
133.980 FLEX. 2		2		2	2	10-20 % OPEN AT 6.0
134.900 FLEX.		5			212	60_80 % OPEN
135.800 FLEX. 1-	+7	2+3			2+3	60-80 % OPEN
136.300 FLEX. 2		2		•	2+3	60-80 % OPEN
137.900 FLEX. 4		2		2 .	∠ .	20-40 % OPEN AT 4.0
138.130 FLEX. 1		1+5		•		10-20 % OPEN AT 3.0
139.800 FLEX. 2		5+8				60-80 % OPEN 60-80 % OPEN 60-80 % OPEN BLOCKED AT 2.0 60-80 % OPEN 60-80 % OPEN 10-20 % OPEN AT 6.0 60-80 % OPEN 60-80 % OPEN 60-80 % OPEN 20-40 % OPEN AT 3.0 20-40 % OPEN AT 3.0 20-40 % OPEN AT 4.0 BLOCKED AT 5.0 60-80 % OPEN AT 2.5 40-60 % OPEN AT 1.0
141.180 FLEX. 2	+4+5+8					0 % OPEN AT 4.0
143.630 FLEX. 6		5+6				DIOCKED AT 5 0
144.200 FLEX. 2	+3+6	5+6			2	60-80 & OPEN
145.847 FLEX. 3					2.2	CO OO & OPEN
146.840 FLEX. 3				_	2+3	60 00 % OPEN
147.900 FLEX. 2	+3	2		2	3	0 % OPEN AT 0.0
149.672 FLEX. 3	1					40 60 % OPEN AT 2.5
150.870 FLEX. 1	.+5					40-60 % OPEN AT 2.5 40-60 % OPEN AT 4.0
149.672 FLEX. 3 150.870 FLEX. 1 151.280 FLEX. 154.810 FLEX. 4		5+8				20-40 % OPEN AT 1.0
154.810 FLEX. 4	+5					40-60 % OPEN AT 2.0
						40-60 % OPEN AT 1.5
155.460 FLEX. 4 156.960 FLEX. 157.710 FLEX. 5 158.850 FLEX. 2	l+5			_		20-40 % OPEN AT 1.0 40-60 % OPEN AT 2.0 40-60 % OPEN AT 1.5 60-80 % OPEN 0 % OPEN AT 0.0
156.960 FLEX.		2		2	2+3+5	0 % OPEN AT 0.0
157.710 FLEX. 5	5					40-60 % OPEN AT 3.0
158.850 FLEX. 2	2	6+8				40-60 & OPEN AT 3.0
160.200 FLEX. 4	1+3	2				40-60 % OPEN AT 3.0
161.540 FLEX. 4	+5+6					0 % OPEN AT 2.0
162.750 FLEX. 6	5				_	0 % OPEN AT 2.0
164.690 FLEX.		2		2	2	60-80 % OPEN AT 3 5
167.470 FLEX. 4	1					20-40 % OPEN AT 3.5
169.850 FLEX.		2				60-80 % OPEN
171.730 FLEX.		2				60-80 % OPEN
172.630 FLEX.		2+3				60-80 % OPEN
173.430 FLEX. 8	8	5				BLOCKED AT 5.0
	·					CONT'ED

... I-75 S

174.740 FLEX. 8	2	60-80 % OPEN
175.740 FLEX. 6		BLOCKED AT 1.0
		BLOCKED AT 1.0
176.890 FLEX. 6	_	10-20 % OPEN AT 5.0
177.630 FLEX. 2	5	BLOCKED AT 1.5
178.510 FLEX. 4+5	+6	
179.690 RIGID	5	20-40 % OPEN AT25.0
2/3/07/ 112020		

NUMBER OF BLOCKED/COMPRESSED OUTLET PIPE = 54 % OF BLOCKED/COMPRESSED OUTLET PIPE = 75.0 APPENDIX C SUMMARY OF I-71

****** SUMMARY******* ****** PAVEMENT SUBDRAIN EVALUATION ****** HEADWALL & OUTLET PIPE

ROUTE = I-71

DIRECTION = SOUTH+NORTH INSP.DATE = JULY 1991

	NUMBER	PERCENTAGE
1. CLEAN HEADWALL	48	42.50
* WITH OPEN OUTLET PIPE (> = 60% OPEN)	29	25.70
* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	5	4.40
* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	14	12.40
2. PT. COVERED HEADWALL	34	30.10
* WITH OPEN OUTLET PIPE (> = 60% OPEN)	17	15.00
* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	9	8.00
* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	8	7.00
3. COVERED HEADWALL	6	5.30
* WITH OPEN OUTLET PIPE (> = 60% OPEN)	3	2.70
* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	1	0.90
* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	2	1.80
4. PLUGGED HEADWALL * WITH OPEN OUTLET PIPE	25	22.10
* WITH OPEN CUTLET FIFE (>= 60% OPEN) * WITH PARTIALLY OPEN CUTLET	5	4.40
* WITH PARTIALLI OPEN COILLI PIPE (40-60% OPEN) * WITH BLOCKED OUTLET PIPE	7	6.20
(< 40% OPEN)	13	11.50
5. HEADWALL & OUTLET PIPE CONDIT * INSPECTED HEADWALL & PIPE * FULLY IN SERVICE * PT. IN SERVICE * OUT OF SERVICE	PION: 113 29 35 49	25.60 31.00 43.40

Note: -Fully in Service = headwall is clean with pipe > 60% open -PT. in service = clean headwall with pipe 40-60% open, or PT. covered/covered headwall with pipe 40%-60% open. -Out of service = Plugged headwall, or outlet with pipe < 40% open

****** SUMMARY****** ****** PAVEMENT SUBDRAIN EVALUATION ****** HEADWALL

ROUTE = I-71

DIRECTION = SOUTH+NORTH INSP.DATE = JULY 1991

		NUMBER	PERCENTAGE
1.	INSPECTED HEADWALL	113	
2.	HEADWALL CONDITION :		42.50
	CLEAN HEADWALL	48	30.10
	PT. COVERED HEADWALL	34	5.30
	COVERED HEADWALL	6 25	22.10
	PLUGGED HEADWALL	25	22.10
3.	COVERING MATERIAL :		
	GRAVEL OR GRAVEL +	44	38.90
	DIRT. OR DIRT.+	33	29.20
	VEG. OR VEG. +	26	23.00
	CON. OR CON. +	10	9.00
4.	SCREEN:		
	NONE	28	24.80
	OPEN	53	46.80
	PARTIALLY OPEN	16	14.20 14.20
	BLOCK	16	14.20
	RUSTED SCREEN	37	33.00
5.	SILTATION :		
	NONE	92	81.40
	SLIGHTLY	13	11.50
	MODERATELY	5 3	4.40
	SEVERLY	3	2.70
6.	FLOW :		24.52
	YES	107	94.70
	ИО	6	5.30
7.	DRAINAGE :		85.00
	GOOD	96	15.00
	POOR	17	15.00

****** SUMMARY ******* ****** PAVEMENT SUBDRAIN EVALUATION ****** ***** OUTLET PIPE *****

ROUTE = I-71

DIRECTION = SOUTH+NORTH INSP.DATE = JULY 1991

		DEDCENMACE
	NUMBER	PERCENTAGE
I. INSPECTED OUTLET PIPE II. OPEN PIPE (>80% OPEN) III. COMPRESSED/BLOCKED PIPE * 60% - 80% OPEN * 40% - 60% OPEN * < 40 % OPEN OR BLOCKED	113	
I. INSPECTED COLLET FIFE	52	46.00
II. OPEN PIPE (>00% OPEN)	61	54.00
III. COMPRESSED/ BLOCKED FILL	2	1.80
* 60% - 60% OPEN	22	19.50
* 408 - 006 OPEN	37	32.70
* < 40 % OPEN OR BEOCRED	.	
IV. OUTLET PIPE WITH PROBLEM AT/NE HEADWALL (AT A) 1. SAG	AR OUTLET/	
HEADWALL (AT A)	67	59.30
1 SAC	28	24.80
2 SAG W/ STANDING WATER	16	14.20
2. SAG W/ STEMATION	9	8.00
4 COMPRESED COUPLING	5	4.40
5 COMPRESSED PIPE	21	18.60
6 DACKETLE IN DIPE	5	4.40
7 CEDARATION AT COUPLING	0	0.00
O DID IN DIDE	2	1.80
O COMPRESED DANET.	0	0.00
10 COMPRESSED AND STIMED		
1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED PANEL	0	0.00
PANEL		
V. OUTLET PIPE WITH PROBLEM AT B 1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED	: 80	70.80
1 SAG	20	9.70
2 SAG W/ STANDING WATER	25	22.10
3 SAG W/ SILTATION	10	8.80
4 COMPRESSED COUPLING	3	2.70
5. COMPRESSED PIPE	34	30.00
6. BACKFILL IN PIPE	6	5.30
7. SEPARATION AT COUPLING	0	0.00
8 RTP IN PIPE	2	1.80
9. COMPRESSED PANEL	0	0.00
10. COMPRESSED AND SILTED		
PANEL	0	0.00
	- 10	8.80
VI. OUTLET PIPE WITH PROBLEM AT H	E: 10	5.30
1. SAG	6	0.90
 SAG W/ STANDING WATER 	1	1.80
3. SAG W/ SILTATION	2	
4. COMPRESSED COUPLING	1	0.90
5. COMPRESSED PIPE	0	0.00
6. BACKFILL IN PIPE	0	0.00
 SEPARATION AT COUPLING 	0	0.00
8. RIP IN PIPE	0	0.00
		CONT'ED

		I-71 N+S
9. COMPRESSED PANEL 10. COMPRESSED AND SILTED PANEL	0	0.00
VII. OUTLET PIPE WITH PROBLEM AT F: 1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED PANEL	6 1 2 1 0 1 1 0 0	5.30 0.90 1.80 0.90 0.00 0.90 0.90 0.00 0.00

****** SUMMARY******* ****** PAVEMENT SUBDRAIN EVALUATION ****** HEADWALL & OUTLET PIPE

ROUTE = I-71 DIRECTION = NORTH

INSP.DATE = JULY 1991

		NUMBER	PERCENTAGE
1.	CLEAN HEADWALL	17	29.00
	* WITH OPEN OUTLET PIPE (> = 60% OPEN)	11	19.00
	* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	1	2.00
	* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	5	9.00
2.	PT. COVERED HEADWALL	21	36.00
	* WITH OPEN OUTLET PIPE (> = 60% OPEN)	11 .	19.00
	* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	3	5.00
	* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	7	12.00
3.	COVERED HEADWALL	5	9.00
	* WITH OPEN OUTLET PIPE (> = 60% OPEN)	2	3.00
	* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	1	2.00
	* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	2	3.00
4.	PLUGGED HEADWALL	15	26.00
	* WITH OPEN OUTLET PIPE (>= 60% OPEN)	1	2.00
	* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	5	9.00
	* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	9	16.00
5	 HEADWALL & OUTLET PIPE CONDIT * INSPECTED HEADWALL & PIPE * FULLY IN SERVICE * PT. IN SERVICE * OUT OF SERVICE 	58 11 18 29	19.00 31.00 50.00

Note: -Fully in Service = headwall is clean with pipe > 60% open -PT. in service = clean headwall with pipe 40-60% open, or PT. covered/covered headwall with pipe < 60% open. -Out of service = Plugged headwall, or outlet with pipe < 40% open

****** SUMMARY******* ****** PAVEMENT SUBDRAIN EVALUATION ****** HEADWALL

ROUTE = I-71 DIRECTION = NORTH DATE = JULY 1991

	NUMBER	PERCENTAGE
1. INSPECTED HEADWALL	58	
2. HEADWALL CONDITION: CLEAN HEADWALL PT. COVERED HEADWALL COVERED HEADWALL PLUGGED HEADWALL	17 21 5 15	29.00 36.00 9.00 26.00
3. COVERING MATERIAL: GRAVEL OR GRAVEL + DIRT. OR DIRT.+ VEG. OR VEG. + CON. OR CON. +	30 17 13 6	52.00 29.00 22.00 10.00
4. SCREEN: NONE OPEN PARTIALLY OPEN BLOCK	12 22 14 10	21.00 38.00 24.00 17.00
RUSTED SCREEN 5. SILTATION: NONE SLIGHTLY MODERATELY SEVERLY	49 4 3 2	84.00 7.00 5.00 3.00
6. FLOW : YES NO	54 4	93.00 7.00
7. DRAINAGE: GOOD POOR	50 8	86.00 14.00

****** SUMMARY ******* ****** PAVEMENT SUBDRAIN EVALUATION ****** ***** OUTLET PIPE *****

ROUTE = I-71 DIRECTION = NORTH INSP.DATE = JULY 1991

~ = u	NUMBER	PERCENTAGE
I. INSPECTED OUTLET PIPE II. OPEN OUTLET PIPE (>80% OP III. COMPRESSED/BLOCKED OUTLET PIPE * 60% - 80% OPEN * 40% - 60% OPEN	5 Q	
I. INSPECTED OUTLET PIPE	25	43.00
II. OPEN OUTLET PIPE (>80% OP	. 23 - 23	57.00
III. COMPRESSED/BLOCKED OUTLET PIPE	<u> </u>	0.00
* 60% - 80% OPEN	10	17 00
* 40% - 60% OPEN	10	17.00
* 40% - 60% OPEN * < 40 % OPEN OR BLOCKED	23	40.00
IV. OUTLET PIPE WITH PROBLEM AT/NE	AR OUTLET/	
IV. OUTLET PIPE WITH PROBLEM AT/NEA HEADWALL (AT A) 1. SAG 2. CAC W/ STANDING WATER	29	50.00
HEADWALL (AT A)	12	21.00
1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL	0	14.00
2. SAG W/ STANDING WATER	0	14.00
3. SAG W/ SILTATION	8	0.00
4. COMPRESSED COUPLING	0	9.00
5. COMPRESSED PIPE	5	2.00
6. BACKFILL IN PIPE	1	2.00
7. SEPARATION AT COUPLING	0	0.00
Q RIP IN PIPE	1	2.00
o COMPRESSED PANEL	0	0.00
9. COMPRESSED PANEL 10. COMPRESSED AND SILTED		
PANEL	0	0.00
ATTENDED TO THE PROPERTY AT R	. 47	81.00
V. OUTLET PIPE WITH PROBLEM AT B	14	24.00
V. OUTLET PIPE WITH PROBLEM AT B 1. SAG	14	24.00
2. SAG W/ STANDING WATER	6	10.00
3. SAG W/ SILTATION	0	0.00
4. COMPRESSED COUPLING	10	33.00
5. COMPRESSED PIPE	7.3	5.00
6. BACKFILL IN PIPE	3	0.00
7. SEPARATION AT COUPLING	0	3 00
1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL	2	0.00
9. COMPRESSED PANEL	0	0.00
10. COMPRESSED AND SILTED		0.00
PANEL	0	0.00
The second secon	: 3	5.00
VI. OUTLT PIPE WITH PROBLEM AT E	3	5.00
1. SAG	0	0.00
2. SAG W/ STANDING WATER		0.00
3. SAG W/ SILTATION	0	0.00
4. COMPRESSED COUPLING	0	0.00
5. COMPRESSED PIPE	0	0.00
6. BACKFILL IN PIPE	0	
7. SEPARATION AT COUPLING	0	0.00
8. RIP IN PIPE	0	0.00
		CONT'ED

		I-71 N	
9. COMPRESSED PANEL	0	0.00	
10. COMPRESSED AND SILTED PANEL	0	0.00	
VII. OUTLET PIPE WITH PROBLEM AT F 1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED	: 5 1 1 1 0 1 1 0 0	9.00 2.00 2.00 0.00 2.00 2.00 0.00 0.00	
PANEL	0	0.00	

****** PAVEMENT SUBDRAIN EVALUATION ****** *** ALL INSPECTED HEADWALL ***

ROUTE = I-71 DIRECTION = NORTH

MILEPOST	HEADWALL TYPE/LOC./COND	COVER MATR.	SCREEN	SIL	T. FLOW	DRA:	INAGE
16.040	S-H / PLUGGED	G	BLOCK		NONE	YES	GOOD
17.210	S-H / PLUGGED		BLOCK		NONE	ИО	GOOD
18.060	S-H / PLUGGED		BLOCK		NONE	YES	GOOD
19.090	S-H / PT.COV.		PT.OPEN		NONE	YES	GOOD
20.270	S-H / PLUGGED		BLOCK		NONE	YES	GOOD
21.020	S-H / PT.COV.	G	PT.OPEN		SLIGHT	YES	GOOD
22.590	S-H / PLUGGED		BLOCK		NONE	YES	POOR
23.250	S-H / PLUGGED		PT.OPEN	RUSTED	NONE	YES	POOR
24.490	S-H / PT.COV.	• • • • • • • • • • • • • • • • • • • •		RUSTED	MOD.	YES	POOR
25.670	S-H / PLUGGED	С	OPEN	RUSTED	NONE	YES	GOOD
26.200	S-H / PLUGGED	Ċ	OPEN	RUSTED	NONE	YES	GOOD
27.100	S-H / PLUGGED	Ċ	BLOCK		NONE	ИО	POOR
28.220	S-H / PLUGGED		OPEN	RUSTED	NONE	YES	POOR
30.840	S-H / COVER.		PT.OPEN		NONE	YES	GOOD
31.410	S-H / COVER.		BLOCK		NONE	ИО	GOOD
32.540	S-H / PT.COV.		OPEN		NONE	YES	GOOD
33.660	S-H / CLEAN		OPEN		NONE	YES	GOOD
34.110	S-H / PLUGGED	D +V	BLOCK	RUSTED	NONE	YES	GOOD
35.800	S-H / PT.COV.	G	OPEN	RUSTED	NONE	YES	GOOD
36.680	S-H / COVER.	G	BLOCK	RUSTED	NONE	YES	GOOD
37.660	S-H / CLEAN	*	OPEN		NONE	YES	GOOD
39.870	S-H / CLEAN		NONE		NONE	YES	GOOD
40.100	S-H / CLEAN		NONE		NONE	YES	GOOD
41.260	S-H / CLEAN		OPEN	RUSTED	NONE	YES	GOOD
42.100	S-H / CLEAN		OPEN		NONE	YES	GOOD
43.230	S-H / PT.COV.	D +V	NONE		MOD.	YES	GOOD
44.250	S-H / CLEAN		OPEN		NONE	YES	GOOD
45.110	S-H / PT.COV.	G +V	OPEN	RUSTED	NONE	YES	GOOD
46.130	S-H / CLEAN		OPEN		NONE	YES	GOOD GOOD
47.060	S-H / CLEAN		NONE		NONE	YES	GOOD
48.560	S-H / CLEAN		OPEN	RUSTED	NONE	YES	GOOD
49.400	S-H / PT.COV.	G	NONE		NONE	YES YES	GOOD
50.360	S-H / CLEAN		NONE		NONE	YES	GOOD
51.500	S-H / PT.COV.	G	OPEN		NONE	YES	GOOD
52.230	S-H / PT.COV.	G	OPEN	DIIGMED	NONE	YES	GOOD
53.130	S-H / CLEAN		OPEN	RUSTED	NONE	YES	POOR
54.990	S-H / PT.COV.	G	OPEN	RUSTED	SLIGHT	YES	GOOD
55.190	S-H / PLUGGED	C	OPEN	RUSTED	NONE	YES	GOOD
56.400	S-H / CLEAN	.	OPEN	RUSTED	NONE MOD.	YES	POOR
57.320	S-H / PLUGGED		PT.OPEN			YES	GOOD
58.410	S-H / PT.COV.	G	OPEN	RUSTED	NONE	YES	GOOD
59.330	S-H / COVER.	G	PT.OPEN	RUSTED	SLIGHT	CON	

.. I-71 N

65.130 S-H / PT.COV. PT. 66.450 S-H / CLEAN OPE 67.090 S-H / COVER. PT. 68.870 S-H / PT.COV. PT. 69.160 S-H / PLUGGED BLC	OPEN RUSTED NONE YES OPEN RUSTED NONE YES N NONE YES OPEN NONE YES OPEN SEV. YES OCK SEV. NO OPEN NONE YES IE NONE YES	GOOD GOOD GOOD GOOD GOOD GOOD GOOD GOOD
---	--	--

NOTE : COVER MATR --> G=GRAVEL; D=DIRT.; V=VEG.; C=CONCRETE

ROUTE = I-71 DIRECTION = NORTH HEADWALL = CLEAN

MILEPOST	HEADWALL TYPE/LOC.		SCREEN	SILT.	FLOW	DRAINAGE
33.660 37.660 39.870 40.100 41.260 42.100 44.250 46.130 47.060 48.560 50.360 53.130 56.400 62.680 66.450 73.240 76.150	S-H S-H S-H S-H S-H S-H S-H S-H S-H S-H	OPEN OPEN NONE OPEN OPEN OPEN NONE OPEN OPEN	RUSTED RUSTED RUSTED RUSTED	NONE NONE NONE NONE NONE NONE NONE NONE	YES	GOOD GOOD GOOD GOOD GOOD GOOD GOOD GOOD

NUMBER OF CLEAN HEADWALL = 17 % OF CLEAN HEADWALL = 29.3

ROUTE = I-71 DIRECTION = NORTH INSP.DATE = JULY 1991 HWADWALL = PLUGGED

MILEPOST	LOC./ TYPE	COVER MATER		EEN	SILT.	FLOW	DRAINAGE
16.040 17.210 18.060 20.270 22.590 23.250 25.670 26.200 27.100 28.220 34.110 55.190 57.320 61.910 69.160	S-H S-H S-H S-H S-H S-H S-H S-H S-H S-H	G G/D/V G/D/V G/D/V G+V+C C C C G/D/V D+V C G+D G/D/V	BLOCK BLOCK BLOCK BLOCK PT.OPEN OPEN OPEN BLOCK OPEN BLOCK OPEN PT.OPEN BLOCK	RUSTED RUSTED RUSTED RUSTED RUSTED RUSTED RUSTED RUSTED	NONE NONE NONE NONE NONE NONE NONE NONE	YES NO YES YES YES YES YES NO YES YES YES YES YES YES YES NO	GOOD GOOD GOOD POOR POOR GOOD POOR GOOD GOOD GOOD GOOD

NOTE: COVER MATR.--> G=GRAVEL; D= DIRT., V=VEG.; C=CONCRETE NUMBER OF PLUGGED HEADWALL = 15 25.9

ROUTE = I-71 DIRECTION = NORTH

HEADWALL = PT. COVER./COVER.

MILEPOST LO	OC./ COVER		SILT.	FLOW	DRAINAGE
21.020 S S S S S S S S S S S S S S S S S S	-H G -H G/D/V -H G/D/V -H G/D/V -H G/D/V -H G/D/V -H G	BLOCK RUS NONE OPEN RUS NONE OPEN OPEN OPEN PT.OPEN PT.OPEN RUS PT.OPEN RUS PT.OPEN RUS RUS	NONE SLIGHT TED MOD. NONE NONE NONE TED NONE TED NONE NONE NONE STED NONE STED SLIGHT STED NONE STED SLIGHT	YES YES YES NO YES	GOOD GOOD GOOD GOOD GOOD GOOD GOOD GOOD

NOTE : COVER MATR. --> G=GRAVEL; D= DIRT., V=VEG.; C=CONCRETE

NUMBER OF PT.COVERED HEADWALL = 21 % OF PT. COVERED HEADWALL = 36.2 NUMBER OF COVERED HEADWALL = 5 % OF COVERED HEADWALL = 8.6

ROUTE = I-71 DIRECTION = NORTH HEADWALL = S-H

NO SCREEN/RUSTED

MILEPOST	HEADWALL	SCRI	EEN	SILT.	FLOW	DRAINAGE
23.250 24.490 25.670 26.200 28.220 34.110 35.800 36.680 39.870 40.100 41.260 43.230 45.110 47.060	PLUGGED PT.COVER. PLUGGED PLUGGED PLUGGED PLUGGED PT.COVER. COVER. CLEAN	PT.OPEN PT.OPEN OPEN OPEN OPEN BLOCK OPEN BLOCK NONE NONE OPEN NONE OPEN NONE	RUSTED RUSTED RUSTED RUSTED RUSTED RUSTED RUSTED RUSTED RUSTED	NONE MOD. NONE NONE NONE NONE NONE NONE NONE NON	FLOW YES	POOR POOR GOOD GOOD GOOD GOOD GOOD GOOD GOOD G
47.060 48.560 49.400 50.360 53.130 54.990 55.190 56.400 57.320 58.410 59.330 61.910 63.610 65.130 71.020 72.360 73.240 74.070 75.210	CLEAN CLEAN PT.COVER. CLEAN CLEAN PT.COVER. PLUGGED CLEAN PLUGGED PT.COVER. COVER. PLUGGED PT.COVER. PT.COVER. PT.COVER. PT.COVER. PT.COVER. PT.COVER. PT.COVER.	NONE OPEN NONE OPEN OPEN OPEN OPEN OPEN	RUSTED	NONE NONE NONE NONE SLIGHT NONE MOD. NONE NONE NONE NONE NONE NONE NONE NON		

NUMBER OF HEADWALL W/ NO OR RUSTED SCREEN = 33 = 56.9

** ALL INSPECTED OUTLET PIPE **

ROUTE = I-71 DIRECTION = NORTH INSP. DATE= JULY 1991

MILEPOST PIPE TYPE A B C D E F
TYPE A B C D E F 16.040 FLEX. 1+5 17.210 FLEX. 2 5+6+8 18.060 FLEX. 1 5 19.090 FLEX. 2 5 20.270 FLEX. 5 5 21.020 FLEX. 3 2 22.590 FLEX. 3 5 23.250 FLEX. 3 5 24.490 FLEX. 2 25.670 FLEX. 3 2+5+8 27.100 FLEX. 3 2+5+8 28.220 FLEX. 3 2+5+8 28.220 FLEX. 3 2+5+8 28.220 FLEX. 3 2+5+8 28.220 FLEX. 3 3 5 31.410 FLEX. 2 5 31.410 FLEX. 2 5 31.410 FLEX. 2 5 31.410 FLEX. 3 3+5+6 31.410 FLEX. 3 5 31.410 FLEX. 3 3+5+6 31.410 FLEX. 3 5 31.410 FLEX. 2 5 31.410 FLEX. 3 5 31.410 FLEX. 2 5 31.410 FLEX. 3 5 31.410 FLEX. 1 1+5 31.410 FLEX. 1 1+5 31.410 FLEX. 2 5 31.410 FLEX. 2 5 31.410 FLEX. 1 1+5 31.410 FLEX. 2 5 31.410 FLEX. 2 5 31.410 FLEX. 2 5 31.410 FLEX. 2 5 31.410 FLEX. 1 1+5 31.410 FLEX. 2 5 31.410 FLEX
16.040 FLEX. 1+5 17.210 FLEX. 2 5+6+8 17.210 FLEX. 2 5 5+6+8 19.090 FLEX. 1 5 0 % OPEN AT 10.0 19.090 FLEX. 5 5 0 % OPEN AT 3.0 20.270 FLEX. 5 5 0 % OPEN AT 3.0 21.020 FLEX. 3 2 22.590 FLEX. 3 5 20.270 FLEX. 3 2 22.590 FLEX. 3 5 20.270 FLEX. 3 2 23.250 FLEX. 2 2 5 20.270 FLEX. 3 2 24.490 FLEX. 2 2 5 20.40 % OPEN AT 0.0 20.40
16.040 FLEX. 1+5 17.210 FLEX. 2 5+6+8 17.210 FLEX. 2 5 5+6+8 19.090 FLEX. 1 5 0 % OPEN AT 10.0 19.090 FLEX. 5 5 0 % OPEN AT 3.0 20.270 FLEX. 5 5 0 % OPEN AT 3.0 21.020 FLEX. 3 2 22.590 FLEX. 3 5 20.270 FLEX. 3 2 22.590 FLEX. 3 5 20.270 FLEX. 3 2 23.250 FLEX. 2 2 5 20.270 FLEX. 3 2 24.490 FLEX. 2 2 5 20.40 % OPEN AT 0.0 20.40
21.020 FLEX. 3 5 2 40-60 % OPEN AT 3.5 22.590 FLEX. 3 5 20-40 % OPEN AT 0.0 20-40 % OP
21.020 FLEX. 3 5 2 40-60 % OPEN AT 3.5 22.590 FLEX. 3 5 20-40 % OPEN AT 0.0 20-40 % OP
21.020 FLEX. 3 5 2 40-60 % OPEN AT 3.5 22.590 FLEX. 3 5 20-40 % OPEN AT 0.0 20-40 % OP
21.020 FLEX. 3 5 2 40-60 % OPEN AT 3.5 22.590 FLEX. 3 5 20-40 % OPEN AT 0.0 20-40 % OP
21.020 FLEX. 3 5 2 40-60 % OPEN AT 3.5 22.590 FLEX. 3 5 20-40 % OPEN AT 0.0 20-40 % OP
21.020 FLEX. 3 5 2 40-60 % OPEN AT 3.5 22.590 FLEX. 3 5 20-40 % OPEN AT 0.0 20-40 % OP
24.490 FLEX. 25.670 FLEX. 26.200 FLEX. 27.100 FLEX. 27.100 FLEX. 30.840 FLEX. 31.410 FLEX. 2 5 32.540 FLEX. 33.660 FLEX. 33.660 FLEX. 34.110 FLEX. 35.800 FLEX. 37.660 FLEX. 38.550 FLEX. 3
24.490 FLEX. 25.670 FLEX. 26.200 FLEX. 27.100 FLEX. 27.100 FLEX. 30.840 FLEX. 31.410 FLEX. 2 5 32.540 FLEX. 33.660 FLEX. 33.660 FLEX. 34.110 FLEX. 35.800 FLEX. 37.660 FLEX. 38.550 FLEX. 3
24.490 FLEX. 25.670 FLEX. 26.200 FLEX. 27.100 FLEX. 27.100 FLEX. 30.840 FLEX. 31.410 FLEX. 2 5 32.540 FLEX. 33.660 FLEX. 33.660 FLEX. 34.110 FLEX. 35.800 FLEX. 37.660 FLEX. 38.550 FLEX. 3
24.490 FLEX. 25.670 FLEX. 26.200 FLEX. 27.100 FLEX. 3 2+5+8 20.40 % OPEN AT 0.0 28.220 FLEX. 30.840 FLEX. 2+3 5 20.40 % OPEN AT 0.0 31.410 FLEX. 2 5 2 5 20.540 FLEX. 33.660 FLEX. 1 2 2 5 20.580 FLEX. 3 3+5+6 20.580 FLEX
25.670 FLEX. 26.200 FLEX. 27.100 FLEX. 3
26.200 FLEX. 3 2+5+8 BLOCKED AT 7.0 20-40 % OPEN AT 0.0 20-40 % OPEN AT 0.0 40-60 % OPEN AT 12.0 0 % OPEN AT 2.0 31.410 FLEX. 2 5 10-20 % OPEN AT 2.0 9 PIPE OPEN 40-60 % OPEN AT 1.0 33.660 FLEX. 1 2 40-60 % OPEN AT 1.0 35.800 FLEX. 3 3+5+6 36.680 FLEX. 3 5 3+5+6 37.660 FLEX. 1 1+5 1 39.870 FLEX. 1 1+5 1 40.100 FLEX. 1+5 1 40.100 FLEX. 1+5 1 41.260 FLEX. 2 5 42.100 FLEX. 1 5 43.230 FLEX. 1 5 44.250 FLEX. 3 2+3 45.110 FLEX. 6 46.130 FLEX. 6 46.130 FLEX. 6 46.130 FLEX. 1 5 47.060 FLEX. 1 5 47.060 FLEX. 5 2 5 47.060 FLEX. 1 5 47.060 FLEX. 1 5 47.060 FLEX. 5 5 0PIPE OPEN 40-60 % OPEN AT 0.0 40-60 % OPEN AT 0.0 40-60 % OPEN AT 0.0 9 OPEN AT 0.0
27.100 FLEX. 3
28.220 FLEX. 30.840 FLEX. 2+3 5
30.840 FLEX. 2+3 5 31.410 FLEX. 2 5 32.540 FLEX. 6 33.660 FLEX. 1 2 34.110 FLEX. 2+3+5 5 35.800 FLEX. 3 3+5+6 36.680 FLEX. 3 5 37.660 FLEX. 1 1+5 1 39.870 FLEX. 1 1+5 1 40.100 FLEX. 1+5 1 41.260 FLEX. 1+5 1+5 1 42.200 FLEX. 1 5 42.100 FLEX. 1 5 42.100 FLEX. 1 5 42.100 FLEX. 1 5 43.230 FLEX. 1 5 44.250 FLEX. 3 2+3 45.110 FLEX. 6 46.130 FLEX. 2 47.060 FLEX. 1 48.560 FLEX. 2 47.060 FLEX. 1 48.560 FLEX. 2 5 10-20 % OPEN AT 6.0 10-20 % OPEN AT 1.0 BLOCKED AT 7.0 10-20 % OPEN AT 5.0 BLOCKED AT 5.0 BLOCKED AT 5.0 BLOCKED AT 5.0 PIPE OPEN 40-60 % OPEN AT 5.0 PIPE OPEN 40-60 % OPEN AT 8.0 PIPE OPEN 5 0% OPEN AT 0.0
34.110 FLEX. 2+3+5 5 35.800 FLEX. 3 3+5+6 36.680 FLEX. 3 5 37.660 FLEX. 1+5 1 39.870 FLEX. 1 1+5 40.100 FLEX. 1+5 41.260 FLEX. 2 5 42.100 FLEX. 1+5 1+5 43.230 FLEX. 1 5 44.250 FLEX. 3 2+3 45.110 FLEX. 6 46.130 FLEX. 2 47.060 FLEX. 2 47.060 FLEX. 1 2 BLOCKED AT 7.0 10-20 % OPEN AT 5.0 BLOCKED AT 5.0 BLOCKED AT 5.0 BLOCKED AT 5.0 PIPE OPEN 40-60 % OPEN AT 5.0 PIPE OPEN 0 % OPEN AT 8.0 PIPE OPEN 0 % OPEN AT 0.0
34.110 FLEX. 2+3+5 5 35.800 FLEX. 3 3+5+6 36.680 FLEX. 3 5 37.660 FLEX. 1+5 1 39.870 FLEX. 1 1+5 40.100 FLEX. 1+5 41.260 FLEX. 2 5 42.100 FLEX. 1+5 1+5 43.230 FLEX. 1 5 44.250 FLEX. 3 2+3 45.110 FLEX. 6 46.130 FLEX. 2 47.060 FLEX. 2 47.060 FLEX. 1 2 BLOCKED AT 7.0 10-20 % OPEN AT 5.0 BLOCKED AT 5.0 BLOCKED AT 5.0 BLOCKED AT 5.0 PIPE OPEN 40-60 % OPEN AT 5.0 PIPE OPEN 0 % OPEN AT 8.0 PIPE OPEN 0 % OPEN AT 0.0
34.110 FLEX. 2+3+5 5 35.800 FLEX. 3 3+5+6 36.680 FLEX. 3 5 37.660 FLEX. 1+5 1 39.870 FLEX. 1 1+5 40.100 FLEX. 1+5 41.260 FLEX. 2 5 42.100 FLEX. 1+5 1+5 43.230 FLEX. 1 5 44.250 FLEX. 3 2+3 45.110 FLEX. 6 46.130 FLEX. 2 47.060 FLEX. 2 47.060 FLEX. 1 2 BLOCKED AT 7.0 10-20 % OPEN AT 5.0 BLOCKED AT 5.0 BLOCKED AT 5.0 BLOCKED AT 5.0 PIPE OPEN 40-60 % OPEN AT 5.0 PIPE OPEN 0 % OPEN AT 8.0 PIPE OPEN 0 % OPEN AT 0.0
34.110 FLEX. 2+3+5 5 35.800 FLEX. 3 3+5+6 36.680 FLEX. 3 5 37.660 FLEX. 1+5 1 39.870 FLEX. 1 1+5 40.100 FLEX. 1+5 41.260 FLEX. 2 5 42.100 FLEX. 1+5 1+5 43.230 FLEX. 1 5 44.250 FLEX. 3 2+3 45.110 FLEX. 6 46.130 FLEX. 2 47.060 FLEX. 2 47.060 FLEX. 1 2 BLOCKED AT 7.0 10-20 % OPEN AT 5.0 BLOCKED AT 5.0 BLOCKED AT 5.0 BLOCKED AT 5.0 PIPE OPEN 40-60 % OPEN AT 5.0 PIPE OPEN 0 % OPEN AT 8.0 PIPE OPEN 0 % OPEN AT 0.0
34.110 FLEX. 2+3+5 5 35.800 FLEX. 3 3+5+6 36.680 FLEX. 3 5 37.660 FLEX. 1+5 1 39.870 FLEX. 1 1+5 40.100 FLEX. 1+5 41.260 FLEX. 2 5 42.100 FLEX. 1+5 1+5 43.230 FLEX. 1 5 44.250 FLEX. 3 2+3 45.110 FLEX. 6 46.130 FLEX. 2 47.060 FLEX. 2 47.060 FLEX. 1 2 BLOCKED AT 7.0 10-20 % OPEN AT 5.0 BLOCKED AT 5.0 BLOCKED AT 5.0 BLOCKED AT 5.0 PIPE OPEN 40-60 % OPEN AT 5.0 PIPE OPEN 0 % OPEN AT 8.0 PIPE OPEN 0 % OPEN AT 0.0
37.660 FLEX. 1+5 1 39.870 FLEX. 1 1+5 4 40.100 FLEX. 1+5 4 41.260 FLEX. 2 5 42.100 FLEX. 1+5 1+5 4 43.230 FLEX. 1 5 44.250 FLEX. 3 2+3
37.660 FLEX. 1+5 1 39.870 FLEX. 1 1+5 4 40.100 FLEX. 1+5 4 41.260 FLEX. 2 5 42.100 FLEX. 1+5 1+5 4 43.230 FLEX. 1 5 44.250 FLEX. 3 2+3
37.660 FLEX. 1+5 1 39.870 FLEX. 1 1+5 4 40.100 FLEX. 1+5 4 41.260 FLEX. 2 5 42.100 FLEX. 1+5 1+5 4 43.230 FLEX. 1 5 44.250 FLEX. 3 2+3
40.100 FLEX. 1+5 41.260 FLEX. 2 5 42.100 FLEX. 1+5 1+5 43.230 FLEX. 1 5 44.250 FLEX. 3 2+3 45.110 FLEX. 6 46.130 FLEX. 2 47.060 FLEX. 1 2 40-60 % OPEN AT 5.0 PIPE OPEN 0 % OPEN AT 0.0 PIPE OPEN 2 PIPE OPEN PIPE OPEN 10-20 % OPEN AT23.5
40.100 FLEX. 1+5 41.260 FLEX. 2 5 42.100 FLEX. 1+5 1+5 43.230 FLEX. 1 5 44.250 FLEX. 3 2+3 45.110 FLEX. 6 46.130 FLEX. 2 47.060 FLEX. 1 2 40-60 % OPEN AT 5.0 PIPE OPEN 0 % OPEN AT 0.0 PIPE OPEN 2 PIPE OPEN PIPE OPEN 10-20 % OPEN AT23.5
45.110 FLEX. 0 46.130 FLEX. 2 PIPE OPEN 47.060 FLEX. 1 10-20 % OPEN AT23.5
45.110 FLEX. 0 46.130 FLEX. 2 PIPE OPEN 47.060 FLEX. 1 10-20 % OPEN AT23.5
45.110 FLEX. 0 46.130 FLEX. 2 PIPE OPEN 47.060 FLEX. 1 10-20 % OPEN AT23.5
45.110 FLEX. 0 46.130 FLEX. 2 PIPE OPEN 47.060 FLEX. 1 10-20 % OPEN AT23.5
45.110 FLEX. 0 46.130 FLEX. 2 PIPE OPEN 47.060 FLEX. 1 10-20 % OPEN AT23.5
45.110 FLEX. 0 46.130 FLEX. 2 PIPE OPEN 47.060 FLEX. 1 10-20 % OPEN AT23.5
46.130 FLEX. 2 PIPE OPEN 47.060 FLEX. 1 5 10-20 % OPEN AT23.5 48.560 FLEX. 2 6 40-60 % OPEN AT20.0 49.400 FLEX. 5 PIPE OPEN 50.360 FLEX. 2 PIPE OPEN 51.500 FLEX. 2 PIPE OPEN 52.230 FLEX. 1 5
47.060 FLEX. 1 48.560 FLEX. 2 49.400 FLEX. 50.360 FLEX. 2 51.500 FLEX. 2 52.230 FLEX. 1 5 10-20 % OPEN AT23.5 6 40-60 % OPEN AT20.0 PIPE OPEN PIPE
48.560 FLEX. 2 5 10-20 % OPEN A123.3 49.400 FLEX. 50.360 FLEX. 2 2 PIPE OPEN 51.500 FLEX. 2 PIPE OPEN 52.230 FLEX. 1 5
49.400 FLEX. 50.360 FLEX. 2 51.500 FLEX. 2 52.230 FLEX. 1 50.360 FLEX. 2 51.500 FLEX. 2 52.230 FLEX. 1
9.400 FLEX. 2 PIPE OPEN 50.360 FLEX. 2 PIPE OPEN 51.500 FLEX. 2 PIPE OPEN 52.230 FLEX. 1 5
50.360 FLEX. 2 PIPE OPEN 51.500 FLEX. 2 PIPE OPEN 52.230 FLEX. 1 5
51.500 FLEX. 2 52.230 FLEX. 1 5
52.230 FLEX. 1 5
RIOCKED AT 5.0
52.230 FLEX. 1 5 BLOCKED AT 5.0 St. 200 FLEX. 1 1 BLOCKED AT 3.0
54.990 FLEX. 1 2 BLOCKED AT 0.0
55.190 FLEX. 56.400 FLEX.] 2 BLOCKED AT 0.0 57.320 FLEX. 3 PIPE OPEN 57.320 FLEX. 1 PIPE OPEN
56.400 FLEX.] 2
56.400 FLEX. 1 2 PIPE OPEN 57.320 FLEX. 3
57.320 FLEX. 1 PIPE OPEN DIDE OPEN
PIPE OPEN
TIPE VIEW
10 30 # ODEN AT 6.1
61.910 FLEX. 1 DIPE OPEN
62.680 FLEA. 2
63.610 FLEX. DIDE OPEN
65.130 FLEX. 3
66.450 FLEX. 3
67 000 FIFY 1
BLOCKED 111 VIV
DEOCRED 111 010
70 420 FLEX 2 2+5
71.020 FLEX. 2 CONT'ED

... I-71 N

72.360 FLEX. 2 73.240 FLEX. 1 74.070 FLEX. 1 75.210 FLEX. 1+8 1 76.150 FLEX. 3	1			PIPE	
NUMBER OF OPEN OUTLET PIPE % OF OPEN OUTLET PIPE NUMBER OF COMPRESSED/BLOCKED OUTLET % OF COMPRESSED/BLOCKED OUTLET PIPE	PIPE	=	23 40 35 60		

** OPEN OUTLET PIPE *

ROUTE = I-71

DIRECTION = NORTH

INSP.DATE = JULY 1991

MILEPOST	PIPE TYPE	A	PIPE B	CONDIT	ION D	AT E	F	REMARK
21.020	FLEX.	3	2					
33.660	FLEX.	1	2					
37.660	FLEX.	1+5	1				3	
42.100	FLEX.	1+5	1+5				3	
44.250	FLEX.	3	2+3				2	
46.130	FLEX.		2				2	
47.060	FLEX.		1					
50.360	FLEX.	2	2 2					
51.500	FLEX.							
52.230	FLEX.	1	5 3					
57.320	FLEX.		3					
58.410	FLEX.		1			1		
59.330	FLEX.		1					
60.420	FLEX.		1 .					
62.680	FLEX.		2 1				•	
63.610	FLEX.					1	1	
65.130	FLEX.		3					80-100% OPEN
66.450	FLEX.		3					80-100% OPEN
67.090	FLEX.		1					00-1000 OIL
71.020	FLEX.		2					
72.360	FLEX.		2					
73.240			1			1		
74.070			1			1		
	FLEX.	1+8	1					
76.150	FLEX.		3					

NUMBER OF OPEN OUTLET PIPE = 25 % OF OPEN OUTLET PIPE = 43.1

* COMPRESSED/BLOCKED OUTLET PIPE *

ROUTE = I-71
DIRECTION = NORTH
INSP.DATE = JULY 1991

MILEPOST PIPE		PIPE	CONDITIO	N AT		REMARK
ידעסעי	Α	В	C D	E.	F	
						0 % OPEN AT 4.0 40-60 % OPEN AT10.0 40-60 % OPEN AT10.0 0 % OPEN AT 4.5 40-60 % OPEN AT 3.0 40-60 % OPEN AT 3.5 20-40 % OPEN AT 0.0 20-40 % OPEN AT 0.0
16.040 FLEX.		1+5				0 % OPEN AT 4.0
17.210 FLEX.	2	5+6+8				40-60 % OPEN ATIO.0
18.060 FLEX.	1	5				40-60 % OPEN ATIO.0
19.090 FLEX.	2	5				U & OPEN AT 4.5
20.270 FLEX.	5	5				40-60 % OPEN AT 3.0
22.590 FLEX.	3	5				40-60 % OPEN AT 3.5
23.250 FLEX.						20-40 % OPEN AT 0.0
24.490 FLEX.						20-40 % OPEN AT 0.0
25.670 FLEX.						20-40 % OPEN AT 0.0
26.200 FLEX.						10-20 % OPEN AT 0.0
27.100 FLEX.	3	2+5+8				BLOCKED AT 7.0 20-40 % OPEN AT 0.0
28.220 FLEX.						20-40 % OPEN AT 0.0
30.840 FLEX.	2+3	5				40-60 % OPEN AT12.0
31.410 FLEX.	2	5				0 % OPEN AT 6.0
32.540 FLEX.		6				10-20 % OPEN AT 2.0
32.540 FLEX. 34.110 FLEX. 35.800 FLEX.	2+3+5	5				40-60 % OPEN AT 1.0
35.800 FLEX.	3	3+5+6				BLOCKED AT / • 0
36.680 FLEX. 39.870 FLEX.	3	5				10-20 % OPEN AT 6.0
39.870 FLEX.	1	1+5				BLOCKED AT 5.0
40.100 FLEX.	1+5					BLOCKED AT 2.0
41.260 FLEX.	2	5				40-60 % OPEN AT 5.0
40.100 FLEX. 41.260 FLEX. 43.230 FLEX.	1	5				40-60 % OPEN AT 0.0
43.230 FLEX. 45.110 FLEX. 48.560 FLEX. 49.400 FLEX.	6				_	BLOCKED AT 2.0 40-60 % OPEN AT 5.0 40-60 % OPEN AT 8.0 0 % OPEN AT 0.0 10-20 % OPEN AT23.5
48.560 FLEX.		2			5	40-60 % OPEN AT20.0
49.400 FLEX.					6	40-00 8 0120 112200
53.130 FLEX.	1	1				BLOCKED AT 5.0
54.990 FLEX.	1	2				BLOCKED AT 3.0
55.190 FLEX.						BLOCKED AT 0.0
56.400 FLEX.	1	2				BLOCKED AT 7.0
61.910 FLEX.	1	5				10-20 % OPEN AT 6.0
68.870 FLEX.						BLOCKED AT 0.0
69.160 FLEX.						BLOCKED AT 0.0
70.430 FLEX.	2	2+5				40-60 % OPEN AT14.0

NUMBER OF BLOCKED/COMPRESSED OUTLET PIPE = 33 % OF BLOCKED/COMPRESSED OUTLET PIPE = 56.9

****** SUMMARY******* ****** PAVEMENT SUBDRAIN EVALUATION ****** HEADWALL & OUTLET PIPE

ROUTE = I-71 DIRECTION = SOUTH INSP.DATE = JULY 1991

		NUMBER	PERCENTAGE
1.	CLEAN HEADWALL	31	56.00
	* WITH OPEN OUTLET PIPE (> = 60% OPEN)	18	33.00
	* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	4	7.00
	* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	9	16.00
2.	PT. COVERED HEADWALL	13	24.00
	* WITH OPEN OUTLET PIPE (> = 60% OPEN)	6	11.00
	* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	6	11.00
	* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	1	2.00
3.	COVERED HEADWALL	1	2.00
	* WITH OPEN OUTLET PIPE (> = 60% OPEN)	1	2.00
	* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	0	0.00
	* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	0	0.00
4 .	PLUGGED HEADWALL	10	18.00
	* WITH OPEN OUTLET PIPE (>= 60% OPEN)	4	7.00
	* WITH PARTIALLY OPEN OUTLET PIPE (40-60% OPEN)	2	4.00
	* WITH BLOCKED OUTLET PIPE (< 40% OPEN)	4	7.00
5	 HEADWALL & OUTLET PIPE CONDIT * INSPECTED HEADWALL & PIPE * FULLY IN SERVICE * PT. IN SERVICE * OUT OF SERVICE 	TION: 55 18 17 20	33.00 31.00 36.00

Note: -Fully in Service = headwall is clean with pipe > 60% open -PT. in service = clean headwall with pipe 40-60% open, or PT. covered/covered headwall with pipe < 60% open. -Out of service = Plugged headwall, or outlet with pipe < 40% open

******* SUMMARY******* ******* PAVEMENT SUBDRAIN EVALUATION ****** HEADWALL

ROUTE = I-71 DIRECTION = SOUTH INSP.DATE = JULY 1991

	NUMBER	PERCENTAGE
1. INSPECTED HEADWALL	55	
2. HEADWALL CONDITION:		56.00
CLEAN HEADWALL	31	56.00
PT. COVERED HEADWALL	13	24.00
COVERED HEADWALL	1	2.00 18.00
PLUGGED HEADWALL	10	18.00
3. COVERING MATERIAL:		25 00
GRAVEL OR GRAVEL +	14	25.00 29.00
DIRT. OR DIRT.+	16	24.00
VEG. OR VEG. +	13	7.00
CON. OR CON. +	4	7.00
4. SCREEN :	1.6	29.00
NONE	16	56.00
OPEN	31	4.00
PARTIALLY OPEN	2 6	11.00
BLOCK	б	11.00
RUSTED SCREEN	16	29.00
5. SILTATION :		78.00
NONE	43	16.00
SLIGHTLY	9	4.00
MODERATELY	2	2.00
SEVERLY	1	2.00
6. FLOW :	E 2	96.00
YES	53	4.00
NO	2	4.00
7. DRAINAGE:	46	84.00
GOOD	9	16.00
POOR	J	

****** SUMMARY ******* ****** PAVEMENT SUBDRAIN EVALUATION ***** ***** OUTLET PIPE *****

ROUTE = I-71 DIRECTION = SOUTH INSP.DATE = JULY 1991

INDF.DAIL - 00.		
	NUMBER	PERCENTAGE
I. INSPECTED OUTLET PIPE II. OPEN OUTLET PIPE (>80% OPEN) III. COMPRESSED/BLOCKED OUTLET PIPE * 60% - 80% OPEN * 40% - 60% OPEN * 40% OPEN OR BLOCKED		·
T TNSPECTED OUTLET PIPE	55	40.00
TT OPEN CUTTET PIPE (>80% OPEN)	27	49.00
TI. OPEN COIDET TITE (COUPLET PIPE	28	51.00
III. COMPRESSED/BLOCKED COIDEI 1112	2	4.00
* 60% - 80% OPEN	12	22.00
* 40% - 60% OPEN	1.4	25 00
* 40% - 60% OPEN * < 40 % OPEN OR BLOCKED	14	23.00
THE THE PROPERTY AMEN	ייים.דייוו∩ פ	
IV. OUTLET PIPE WITH PROBLEM ATTICE	70	69.00
HEADWALL (AT A)	30	29 00
1. SAG	10	15.00
2 SAG W/ STANDING WATER	8	15.00
2. SAC W/ STIMATION	1	2.00
3. SAG W/ SIMIRITON	5	9.00
4. COMPRESSED COUPLING	16	29.00
5. COMPRESSED PIPE	10	7.00
6. BACKFILL IN PIPE	4	0.00
7. SEPARATION AT COUPLING	Ü	2.00
8 RIP IN PIPE	1	2.00
O COMPRESED PANET.	0	0.00
4. COMPRESSED THREE		
IO. COMPRESSED AND SIBILD	0	0.00
IV. OUTLET PIPE WITH PROBLEM AT/NEAR HEADWALL (AT A) 1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED PANEL	·	
V. OUTLET PIPE WITH PROBLEM AT B 1. SAG 2. SAG W/ STANDING WATER 3. SAG W/ SILTATION 4. COMPRESSED COUPLING 5. COMPRESSED PIPE 6. BACKFILL IN PIPE 7. SEPARATION AT COUPLING 8. RIP IN PIPE 9. COMPRESSED PANEL 10. COMPRESSED AND SILTED	. 22	60.00
V. OUTLET PIPE WITH PROBLEM AT B	: 33	11 00
1. SAG	0	20.00
2. SAG W/ STANDING WATER	11	20.00
3 SAG W/ STLTATION	4	7.00
4 COMPRESED COUPLING	3	5.00
4. COMPRESSED COOLDING	15	27.00
5. COMPRESSED FIFE	3	5.00
6. BACKFILL IN PIPE	Ŏ	0.00
7. SEPARATION AT COUPLING	•	0.00
8. RIP IN PIPE	Ü	0.00
9. COMPRESSED PANEL	0	0.00
10. COMPRESSED AND SILTED		
PANEL	0	0.00
	7	13.00
VI. OUTLET PIPE WITH PROBLEM AT E	: 7	5.00
1. SAG	3	2.00
2. SAG W/ STANDING WATER	1	
3. SAG W/ SILTATION	2	4.00
	1	2.00
4. COMPRESSED COUPLING	Ō	0.00
5. COMPRESSED PIPE	Ŏ	0.00
6. BACKFILL IN PIPE		0.00
7. SEPARATION AT COUPLING	0	0.00
8. RIP IN PIPE	0	
		CONT'ED

		I-71 S
9. COMPRESSED PANEL	0	0.00
10. COMPRESSED AND SILTED PANEL	0	0.00
VII. OUTLET PIPE WITH PROBLEM AT F :	1	2.00
	0	0.00
1. SAG	1	2.00
2. SAG W/ STANDING WATER	ō	0.00
3. SAG W/ SILTATION	Ô	0.00
4. COMPRESSED COUPLING	Ô	0.00
5. COMPRESSED PIPE	Ŏ	0.00
6. BACKFILL IN PIPE	Ŏ	0.00
7. SEPARATION AT COUPLING	0	0.00
8. RIP IN PIPE	0	0.00
9. COMPRESSED PANEL	J	
10. COMPRESSED AND SILTED PANEL	0	0.00

****** PAVEMENT SUBDRAIN EVALUATION ****** *** ALL INSPECTED HEADWALL ***

ROUTE = I-71 DIRECTION = SOUTH INSP.DATE = JULY 1991

MILEPOST OUTLET TYPE/LOC./COND	COVER MATR.	SCREEN	SI	LT. FLO	W DRA	AINAGE
15.860 S-H / PLUGGED		NONE		NONE	YES	POOR
15.860 S-H / PLUGGED 16.720 S-H / CLEAN		OPEN	RUSTED	NONE	YES	GOOD
17.870 S-H / CLEAN		OPEN		NONE	YES	GOOD
18.610 S-H / CLEAN		OPEN		NONE	YES	GOOD
19.330 S-H / PLUGGED		BLOCK		NONE	YES	POOR
20.730 S-H / PT.COV.		PT.OPEN		SLIGHT	YES	POOR
21.990 S-H / PT.COV.		NONE		NONE	YES	GOOD
22.870 S-H / PLUGGED		BLOCK		NONE	ИО	POOR
23.630 S-H / CLEAN		NONE		NONE	YES	GOOD
24.860 S-H / PT.COV.		OPEN	RUSTED	SLIGHT	YES	POOR
25.780 S-H / PT.COV.		NONE		NONE	YES	GOOD
26.890 S-H / PLUGGED		BLOCK	RUSTED	SEV.	NO	GOOD
28.340 S-H / PT.COV.		OPEN		\mathtt{SLIGHT}	YES	GOOD
29.840 S-H / PT.COV.		PT.OPEN	RUSTED	SLIGHT	YES	GOOD
30.820 S-H / CLEAN		OPEN		NONE	YES	GOOD
31.710 S-H / CLEAN		NONE		NONE	YES	GOOD
32.950 S-H / CLEAN		OPEN		NONE	YES	GOOD
33.650 S-H / CLEAN		OPEN	RUSTED	NONE	YES	GOOD
34.850 S-H / CLEAN		OPEN	RUSTED	NONE	YES	GOOD
35.780 S-H / CLEAN		OPEN		NONE	YES	GOOD
36.960 S-H / CLEAN		OPEN		NONE	YES	GOOD
37.140 S-H / PLUGGED		BLOCK	RUSTED	NONE	YES	GOOD
38.820 S-H / PT.COV.		NONE	RUSTED	SLIGHT	YES	GOOD GOOD
40.440 S-H / CLEAN		OPEN	RUSTED	NONE	YES	GOOD
41.730 S-H / PLUGGED		OPEN		NONE	YES YES	POOR
42.010 S-H / PT.COV.		OPEN	RUSTED	MOD.	YES	GOOD
44.640 S-H / CLEAN		OPEN	RUSTED	NONE	YES	GOOD
45.320 S-H / CLEAN		NONE		NONE NONE	YES	GOOD
46.510 S-H / PT.COV.		OPEN	DUCMED	NONE	YES	POOR
47.660 S-H / CLEAN		NONE	RUSTED	NONE	YES	GOOD
48.840 S-H / CLEAN		OPEN		NONE	YES	GOOD
49.320 S-H / PT.COV.		OPEN OPEN	RUSTED	NONE	YES	GOOD
50.820 S-H / CLEAN			KOSIED	NONE	YES	GOOD
51.740 S-H / CLEAN		OPEN	RUSTED	NONE	YES	GOOD
53.610 S-H / CLEAN		OPEN	RUSTED	NONE	YES	GOOD
54.830 S-H / CLEAN		OPEN OPEN	KODIED	NONE	YES	GOOD
55.650 S-H / CLEAN	G	OPEN		NONE	YES	GOOD
56.870 S-H / COVER. 57.890 S-H / CLEAN	G	OPEN		NONE	YES	GOOD
- · · · · · · · · · · · · · · · · · · ·		OPEN		NONE	YES	GOOD
58.950 S-H / CLEAN 59.790 S-H / PLUGGED	G/D/V	BLOCK	RUSTED	SLIGHT	YES	GOOD
61.500 S-H / PLUGGED		BLOCK		MOD.	YES	GOOD
01.500 D-H / FHOGGED	3, 5, 4				CONT	ED

... I-71 S

65.420 S-H / CLEAN 66.970 S-H / PLUGGED G/D/V NO 67.950 S-H / PT.COV. D 68.800 S-H / CLEAN 70.950 S-H / CLEAN 71.220 S-H / CLEAN 72.620 S-H / CLEAN 73.900 S-H / CLEAN 74.270 S-H / PT.COV. D+V	PEN NONE YES GOOD PEN SLIGHT YES POOF PEN NONE YES GOOD PEN NONE YES GOOD PEN SLIGHT YES POOF PEN NONE YES GOOD	
---	---	--

NOTE : COVER MATR --> G=GRAVEL; D=DIRT.; V=VEG.; C=CONCRETE

ROUTE = I-71 DIRECTION = SOUTH HEADWALL = CLEAN

MILEPOST	OUTLET TYPE/LOC.	SCR	EEN	SILT.	FLOW	DRAINAGE
16.720	 S-H	OPEN	RUSTED	NONE	YES	GOOD
17.870	S-H	OPEN		NONE	YES	GOOD
18.610	S-H	OPEN		NONE	YES	GOOD
23.630	S-H	NONE		NONE	YES	GOOD
30.820	S-H	OPEN		NONE	YES	GOOD
31.710	S-H	NONE	-	NONE	YES	GOOD
32.950	S-H	OPEN		NONE	YES	GOOD
33.650	S-H	OPEN	RUSTED	NONE	YES	GOOD
34.850	S-H	OPEN	RUSTED	NONE	YES	GOOD
35.780	S-H	OPEN		NONE	YES	GOOD
36.960	S-H	OPEN		NONE	YES	GOOD
40.440	S-H	OPEN	RUSTED	NONE	YES	
44.640	S-H	OPEN	RUSTED	NONE	YES	
45.320	S-H	NONE		NONE	YES	
47.660	S-H	NONE	RUSTED	NONE	YES	
48.840	S-H	OPEN		NONE	YES	
50.820	S-H	OPEN	RUSTED	NONE	YES	
51.740	S-H	OPEN		NONE	YES	
53.610	S-H	OPEN	RUSTED		YES	
54.830	S-H	OPEN	RUSTED		YES	
55.650	S-H	OPEN		NONE	YES	
57.890	S-H	OPEN		NONE	YES	
58.950	S-H	OPEN		NONE	YES	
63.310	S-H	OPEN		NONE	YES	
65.420	S-H	OPEN		NONE	YES	
68.800	S-H	NONE		NONE	YES	
70.950	S-H	NONE		NONE	YES	
71.220	S-H	NONE		NONE	YES	
72.620	S-H	NONE		NONE	YES	
73.900	S-H	NONE		NONE	YES	
75.930	S-H	NONE		NONE	YES	

NUMBER OF CLEAN HEADWALL = 31 % OF CLEAN HEADWALL = 56.4

ROUTE = I-71 DIRECTION = SOUTH

HEADWALL = PT. COVER./COVER.

MILEPOST I	LOC./	COVER MATER		REEN	SILT.	FLOW	DRAINAGE
21.990 24.860 25.780 28.340 29.840 38.820 42.010 46.510 49.320 56.870 62.600	S-H S-H S-H S-H S-H S-H S-H S-H S-H S-H	G/D/V G/D/V G/D/V G/D/V	PT.OPEN NONE OPEN NONE OPEN PT.OPEN NONE OPEN OPEN OPEN OPEN OPEN OPEN	RUSTED RUSTED RUSTED RUSTED	SLIGHT NONE SLIGHT NONE SLIGHT SLIGHT MOD. NONE NONE NONE NONE NONE SLIGHT	YES	POOR GOOD GOOD GOOD GOOD GOOD GOOD GOOD G

NOTE : COVER MATR. --> G=GRAVEL; D= DIRT., V=VEG.; C=CONCRETE

NUMBER OF PT.COVERED HEADWALL = 13 % OF PT. COVERED HEADWALL = 23.6 NUMBER OF COVERED HEADWALL = 1 % OF COVERED HEADWALL = 1.8

ROUTE = I-71 DIRECTION = SOUTH INSP.DATE = JULY 1991 HEADWALL = PLUGGED

MILEPOST	LOC./	COVER MATER.	SCREEN	SILT.	FLOW	DRAINAGE
15.860 19.330 22.870 26.890 37.140 41.730 59.790 61.500 64.670 66.970	S-H S-H S-H S-H S-H S-H S-H S-H S-H	G/D/V NONE G/D/V BLOCK G/D/V BLOCK G/D/V BLOCK G/D/V OPEN G/D/V BLOCK G/D/V BLOCK G/D/V BLOCK G/D/V NONE	RUSTED RUSTED RUSTED	NONE NONE SEV. NONE NONE SLIGHT MOD. SLIGHT NONE	YES YES NO NO YES YES YES YES YES YES	POOR POOR GOOD GOOD GOOD GOOD GOOD GOOD GOOD

NOTE: COVER MATR.--> G=GRAVEL; D= DIRT., V=VEG.; C=CONCRETE NUMBER OF PLUGGED HEADWALL = 10 % OF PLUGGED HEADWALL = 18.2

ROUTE = I-71 DIRECTION = SOUTH OUTLET = S-H

NO SCREEN/RUSTED

15.860	MILEPOST	OUTLET	SCREEN		SILT.	FLOW	DRAINAGE	_
68.800 CLEAN NONE NONE YES GOOD 70.950 CLEAN NONE NONE YES GOOD 71.220 CLEAN NONE NONE YES GOOD 72.620 CLEAN NONE NONE YES GOOD 73.900 CLEAN NONE SLIGHT YES GOOD 74.270 PT.COVER. NONE NONE YES GOOD	15.860 16.720 21.990 23.630 24.860 25.780 26.890 29.840 31.710 33.650 34.850 37.140 38.820 40.440 42.010 44.640 45.320 47.660 50.820 53.610 54.830 59.790 66.970 68.800 70.950 71.220 72.620 73.900	PLUGGED CLEAN PT.COVER. CLEAN PT.COVER. PLUGGED PT.COVER. CLEAN CLEAN CLEAN PLUGGED PT.COVER. CLEAN	NONE OPEN NONE OPEN NONE BLOCK PT.OPEN NONE OPEN OPEN OPEN OPEN OPEN OPEN	RUSTED	NONE NONE NONE SLIGHT NONE SEV. SLIGHT NONE NONE NONE NONE NONE NONE NONE NON	YES	GOOD GOOD GOOD GOOD GOOD GOOD GOOD GOOD	_

NUMBER OF HEADWALL W/ NO OR RUSTED SCREEN = 30 = 54.5

** ALL INSPECTED OUTLET PIPE
ROUTE = I-71
DIRECTION = SOUTH
INSP. DATE= JULY 1991

						DEMARK
15.860 FLEX. 2 5+6 16.720 FLEX. 2 5 5 16.720 FLEX. 2 2 5 17.870 FLEX. 2 2 5 19.330 FLEX. 2 2+5 20.730 FLEX. 1 2 21.990 RIGID 22.870 FLEX. 5+6 23.630 RIGID 24.860 FLEX. 5+6 25.780 FLEX. 6 6 26.890 FLEX. 5+6 28.340 FLEX. 2 2+3 30.820 FLEX. 5 5 31.710 FLEX. 1 5 30.820 FLEX. 5 5 31.710 FLEX. 1 5 33.650 FLEX. 5 5 34.850 FLEX. 1 5 35.780 FLEX. 5 5 31.740 FLEX. 1 5 36.960 FLEX. 1 5 37.740 FLEX. 1 5 36.960 FLEX. 1 5 37.740 FLEX. 2 5 38.820 FLEX. 5 5 38.820 FLEX. 5 5 38.820 FLEX. 5 5 38.820 FLEX. 1 5 37.740 FLEX. 1 5 37.740 FLEX. 2 2+4 40.600 ROPEN AT 6.0 40.600 ROPEN AT 7.5 40.600 ROPEN AT 7.0 40.600 ROPEN AT 2.0 40.600 ROPEN	MILEPOST PIPE	PIPE	CONDITION	AT_	-	REMARK
15.860 FLEX. 2 5+6 16.720 FLEX. 2 5 5 16.720 FLEX. 2 2 5 17.870 FLEX. 2 2 5 19.330 FLEX. 2 2+5 20.730 FLEX. 1 2 21.990 RIGID 22.870 FLEX. 5+6 23.630 RIGID 24.860 FLEX. 5+6 25.780 FLEX. 6 6 26.890 FLEX. 5+6 28.340 FLEX. 2 2+3 30.820 FLEX. 5 5 31.710 FLEX. 1 5 30.820 FLEX. 5 5 31.710 FLEX. 1 5 33.650 FLEX. 5 5 34.850 FLEX. 1 5 35.780 FLEX. 5 5 31.740 FLEX. 1 5 36.960 FLEX. 1 5 37.740 FLEX. 1 5 36.960 FLEX. 1 5 37.740 FLEX. 2 5 38.820 FLEX. 5 5 38.820 FLEX. 5 5 38.820 FLEX. 5 5 38.820 FLEX. 1 5 37.740 FLEX. 1 5 37.740 FLEX. 2 2+4 40.600 ROPEN AT 6.0 40.600 ROPEN AT 7.5 40.600 ROPEN AT 7.0 40.600 ROPEN AT 2.0 40.600 ROPEN	TYPE A	В	C D	E	r	
21.990 RIGID 22.870 FLEX. 5+6 23.630 RIGID 24.860 FLEX. 6 6						0 % OPEN AT 3.0
21.990 RIGID 22.870 FLEX. 5+6 23.630 RIGID 24.860 FLEX. 6 6	15.860 FLEX. 2	5+6				40-60 % OPEN AT 6.0
21.990 RIGID 22.870 FLEX. 5+6 23.630 RIGID 24.860 FLEX. 6 6	16.720 FLEX. 2	5		1		
21.990 RIGID 22.870 FLEX. 5+6 23.630 RIGID 24.860 FLEX. 6 6	17.870 FLEX. 2	2		1		
21.990 RIGID 22.870 FLEX. 5+6 23.630 RIGID 24.860 FLEX. 6 6	18.610 FLEX. 1	2				40-60 % OPEN AT 7.0
21.990 RIGID 22.870 FLEX. 5+6 23.630 RIGID 24.860 FLEX. 6 6	19.330 FLEX. 2	2+5				40-60 % OPEN AT 0.0
21.990 RIGID 22.870 FILEX. 5+6 23.630 RIGID 24.860 FLEX. 6 6 6 25.780 FLEX. 5+6 28.340 FLEX. 2 29.840 FLEX. 2 29.840 FLEX. 5 5 31.710 FLEX. 5 33.650 FLEX. 5 33.780 FLEX. 1 36.960 FLEX. 15 37.140 FLEX. 1 37.140 FLEX. 5 38.820 FLEX. 5 40.60 % OPEN AT 2.0 40.60 % OPEN AT 2.0 40.60 % OPEN AT 5.0 40.60 % OPEN AT 5.0 40.60 % OPEN AT 2.0 40.60 % OPEN AT						DIDE ODEN
28.340 FLEX. 2 29.840 FLEX. 2 29.840 FLEX. 5 30.820 FLEX. 5 5 31.710 FLEX. 1 32.950 FLEX. 5 33.650 FLEX. 5 34.850 FLEX. 1 36.960 FLEX. 1 37.140 FLEX. 5 38.820 FLEX. 5 38.820 FLEX. 5 38.820 FLEX. 5 37.140 FLEX. 5 38.820 FLEX. 5 40.60 % OPEN AT 2.0 10.20 % OPEN AT 2.0 10.20 % OPEN AT 9.0 10.20 % OPEN AT 5.0 40.60 % OPEN AT 2.0 40.60 % OPEN AT 3.0	21.990 RIGID					10-20 % OPEN AT 2.5
28.340 FLEX. 2 29.840 FLEX. 2 29.840 FLEX. 5 30.820 FLEX. 5 5 31.710 FLEX. 1 32.950 FLEX. 5 33.650 FLEX. 5 34.850 FLEX. 1 36.960 FLEX. 1 37.140 FLEX. 5 38.820 FLEX. 5 38.820 FLEX. 5 38.820 FLEX. 5 37.140 FLEX. 5 38.820 FLEX. 5 40.60 % OPEN AT 2.0 10.20 % OPEN AT 2.0 10.20 % OPEN AT 9.0 10.20 % OPEN AT 5.0 40.60 % OPEN AT 2.0 40.60 % OPEN AT 3.0						DIDE OPEN
28.340 FLEX. 2 29.840 FLEX. 2 29.840 FLEX. 5 30.820 FLEX. 5 5 31.710 FLEX. 1 32.950 FLEX. 5 33.650 FLEX. 5 34.850 FLEX. 1 36.960 FLEX. 1 37.140 FLEX. 5 38.820 FLEX. 5 38.820 FLEX. 5 38.820 FLEX. 5 37.140 FLEX. 5 38.820 FLEX. 5 40.60 % OPEN AT 2.0 10.20 % OPEN AT 2.0 10.20 % OPEN AT 9.0 10.20 % OPEN AT 5.0 40.60 % OPEN AT 2.0 40.60 % OPEN AT 3.0	23.630 RIGID					40_60 % OPEN AT11.0
28.340 FLEX. 2 29.840 FLEX. 2 29.840 FLEX. 5 30.820 FLEX. 5 5 31.710 FLEX. 1 32.950 FLEX. 5 33.650 FLEX. 5 34.850 FLEX. 1 36.960 FLEX. 1 37.140 FLEX. 5 38.820 FLEX. 5 38.820 FLEX. 5 38.820 FLEX. 5 37.140 FLEX. 5 38.820 FLEX. 5 40.60 % OPEN AT 2.0 10.20 % OPEN AT 2.0 10.20 % OPEN AT 9.0 10.20 % OPEN AT 5.0 40.60 % OPEN AT 2.0 40.60 % OPEN AT 3.0	24.860 FLEX.	1+5				0 % OPEN AT11.0
28.340 FLEX. 2 29.840 FLEX. 2 29.840 FLEX. 5 30.820 FLEX. 5 5 31.710 FLEX. 1 32.950 FLEX. 5 33.650 FLEX. 5 34.850 FLEX. 1 36.960 FLEX. 1 37.140 FLEX. 5 38.820 FLEX. 5 38.820 FLEX. 5 38.820 FLEX. 5 37.140 FLEX. 5 38.820 FLEX. 5 40.60 % OPEN AT 2.0 10.20 % OPEN AT 2.0 10.20 % OPEN AT 9.0 10.20 % OPEN AT 5.0 40.60 % OPEN AT 2.0 40.60 % OPEN AT 3.0	25.780 FLEX. 6	6				10 20 % OPEN AT 3 0
28.340 FLEX. 2 29.840 FLEX. 2 29.840 FLEX. 5 30.820 FLEX. 5 5 31.710 FLEX. 1 32.950 FLEX. 5 33.650 FLEX. 5 34.850 FLEX. 1 36.960 FLEX. 1 37.140 FLEX. 5 38.820 FLEX. 5 38.820 FLEX. 5 38.820 FLEX. 5 37.140 FLEX. 5 38.820 FLEX. 5 40.60 % OPEN AT 2.0 10.20 % OPEN AT 2.0 10.20 % OPEN AT 9.0 10.20 % OPEN AT 5.0 40.60 % OPEN AT 2.0 40.60 % OPEN AT 3.0	26.890 FLEX. 5+6					IO-SO & OLDIN VI 2:0
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT 43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 4 1 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	_					AA CA & ODEN AMII O
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 2 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	29.840 FLEX. 2	2+3				40-60 & OPEN ATIL.0
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 2 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	30.820 FLEX. 5	5				20-40 & OPEN AI 6.0
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 2 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	31.710 FLEX. 1					PIPE OPEN
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 2 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	32.950 FLEX.	5				20-40 % OPEN AT 7.5
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 2 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	33.650 FLEX. 5	5				0 % OPEN AT 4.0
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 2 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	34.850 FLEX. 1	5+6				10-20 % OPEN AT 8.0
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 2 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	35.780 FLEX. 1	5				20-40 % OPEN AT 6.0
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 2 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	36.960 FLEX. 1+5					40-60 % OPEN AT 2.0
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 2 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	37.140 FLEX. 5					10-20 % OPEN AT 2.0
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 2 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	38.820 FLEX.	5				40-60 % OPEN AT 9.0
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 2 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	40.440 FLEX.	5				10-20 % OPEN AT 4.0
42.010 FLEX. 2+4 44.640 FLEX. 1 3 45.320 FLEX. 2 PIPE OPEN 46.510 FLEX. 1 1 47.660 FLEX. 1 1+3 48.840 FLEX. 1 4 49.320 FLEX. 2 PIPE OPEN 49.320 FLEX. 2 40-60 % OPEN AT43.0 50.820 FLEX. 1 5 53.610 FLEX. 5 PIPE OPEN 53.610 FLEX. 5 PIPE OPEN 54.830 FLEX. 4+5 2 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 55.650 FLEX. 3 3 PIPE OPEN 57.890 FLEX. 2 PIPE OPEN 58.950 FLEX. 4 1 PIPE OPEN 59.790 FLEX. 2 PIPE OPEN 60-80 % OPEN AT 0.0 60-80 % OPEN AT 0.0 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	41.730 FLEX.	1+5				40-60 % OPEN AT 5.0
46.510 FLEX. 1 1 1 1	42.010 FLEX.	2+4				80-100% OPEN
46.510 FLEX. 1 1 1 1	44.640 FLEX. 1	3				PIPE OPEN
51.740 FLEX. 5 53.610 FLEX. 54.830 FLEX. 4+5 2 55.650 FLEX. 3 3 56.870 FLEX. 1+5 57.890 FLEX. 2 58.950 FLEX. 4 1 1 1 PIPE OPEN 59.790 FLEX. 2 61.500 FLEX. 4 62.600 FLEX. 4 62.600 FLEX. 5 64.670 FLEX. 1+5 1 80-100% OPEN 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	45.320 FLEX.	2				PIPE OPEN
51.740 FLEX. 5 53.610 FLEX. 54.830 FLEX. 4+5 2 55.650 FLEX. 3 3 56.870 FLEX. 1+5 57.890 FLEX. 2 58.950 FLEX. 4 1 1 1 PIPE OPEN 59.790 FLEX. 2 61.500 FLEX. 4 62.600 FLEX. 4 62.600 FLEX. 5 64.670 FLEX. 1+5 1 80-100% OPEN 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	46.510 FLEX. 1	1				PIPE OPEN
51.740 FLEX. 5 53.610 FLEX. 54.830 FLEX. 4+5 2 55.650 FLEX. 3 3 56.870 FLEX. 1+5 57.890 FLEX. 2 58.950 FLEX. 4 1 1 1 PIPE OPEN 59.790 FLEX. 2 61.500 FLEX. 4 62.600 FLEX. 4 62.600 FLEX. 5 64.670 FLEX. 1+5 1 80-100% OPEN 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	47.660 FLEX. 1	1+3				PIPE OPEN
51.740 FLEX. 5 53.610 FLEX. 54.830 FLEX. 4+5 2 55.650 FLEX. 3 3 56.870 FLEX. 1+5 57.890 FLEX. 2 58.950 FLEX. 4 1 1 1 PIPE OPEN 59.790 FLEX. 2 61.500 FLEX. 4 62.600 FLEX. 4 62.600 FLEX. 5 64.670 FLEX. 1+5 1 80-100% OPEN 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	48.840 FLEX. 1	4				
51.740 FLEX. 5 53.610 FLEX. 54.830 FLEX. 4+5 2 55.650 FLEX. 3 3 56.870 FLEX. 1+5 57.890 FLEX. 2 58.950 FLEX. 4 1 1 1 PIPE OPEN 59.790 FLEX. 2 61.500 FLEX. 4 62.600 FLEX. 4 62.600 FLEX. 5 64.670 FLEX. 1+5 1 80-100% OPEN 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	49.320 FLEX. 2			4		PIPE OPEN
51.740 FLEX. 5 53.610 FLEX. 54.830 FLEX. 4+5 2 55.650 FLEX. 3 3 56.870 FLEX. 1+5 57.890 FLEX. 2 58.950 FLEX. 4 1 1 1 PIPE OPEN 59.790 FLEX. 2 61.500 FLEX. 4 62.600 FLEX. 4 62.600 FLEX. 5 64.670 FLEX. 1+5 1 80-100% OPEN 60-80 % OPEN AT 5.0 64.670 FLEX. 1+5	50.820 FLEX. 1					40-60 % OPEN AT43.0
53.610 FLEX. 54.830 FLEX. 4+5 2 55.650 FLEX. 3 3 56.870 FLEX. 1+5 57.890 FLEX. 2 58.950 FLEX. 4 1 1 1 PIPE OPEN 59.790 FLEX. 2 61.500 FLEX. 4 62.600 FLEX. 4 62.600 FLEX. 5 64.670 FLEX. 1+5 1 80-100% OPEN 80-100% OPEN	51.740 FLEX. 5					40-60 % OPEN AT 2.0
54.830 FLEX. 4+5 2 55.650 FLEX. 3 3 56.870 FLEX. 1+5 57.890 FLEX. 2 58.950 FLEX. 4 1 1 1 PIPE OPEN 59.790 FLEX. 2 61.500 FLEX. 4 2 62.600 FLEX. 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4						PIPE OPEN
62.600 FLEX. 63.310 FLEX. 5 64.670 FLEX. 1+5 40-60 % OPEN AT 0.0 0 % OPEN AT 5.0	54.830 FLEX. 4+5	2				PIPE OPEN
62.600 FLEX. 63.310 FLEX. 5 64.670 FLEX. 1+5 40-60 % OPEN AT 0.0 0 % OPEN AT 5.0	55.650 FLEX. 3	3			2	80-100% OPEN
62.600 FLEX. 63.310 FLEX. 5 64.670 FLEX. 1+5 40-60 % OPEN AT 0.0 0 % OPEN AT 5.0	56.870 FLEX. 1+5					
62.600 FLEX. 63.310 FLEX. 5 64.670 FLEX. 1+5 40-60 % OPEN AT 0.0 0 % OPEN AT 5.0	57.890 FLEX.	2				
62.600 FLEX. 63.310 FLEX. 5 64.670 FLEX. 1+5 40-60 % OPEN AT 0.0 0 % OPEN AT 5.0	58.950 FLEX. 4	1		1		
62.600 FLEX. 63.310 FLEX. 5 64.670 FLEX. 1+5 40-60 % OPEN AT 0.0 0 % OPEN AT 5.0	59.790 FLEX.	2				
62.600 FLEX. 63.310 FLEX. 5 64.670 FLEX. 1+5 1 80-100% OPEN 60.000 OPEN	61.500 FLEX. 4					60-80 % OPEN
	62.600 FLEX.					40-60 % OPEN AT 0.0
	63.310 FLEX.	5				0 % OPEN AT 5.0
	64.670 FLEX. 1+5	•		1		80-100% OPEN
	65.420 FLEX. 1+5					60-80 % OPEN

CONT'ED

... I-71 S

66.970 FLEX. 1+5 67.950 FLEX. 68.800 FLEX. 1	2 4+5	2	80-100% OPEN 40-60 % OPEN AT 0.0 PIPE OPEN PIPE OPEN
70.950 FLEX. 5+6+8 71.220 FLEX. 4+5 72.620 FLEX. 73.900 FLEX. 5	5 2	3	0 % OPEN AT 7.0 PIPE OPEN 10-20 % OPEN AT 2.0
74.270 FLEX. 2+4+5 75.930 FLEX.	1	3	PIPE OPEN PIPE OPEN

NUMBER OF OPEN OUTLET PIPE = 23 % OF OPEN OUTLET PIPE = 42 NUMBER OF COMPRESSED/BLOCKED OUTLET PIPE = 32 % OF COMPRESSED/BLOCKED OUTLET PIPE = 58

** OPEN OUTLET PIPE **

ROUTE = I-71

DIRECTION = SOUTH

INSP.DATE = JULY 1991

MILEPOST PIPE	PIPE	CONDITION	AT		REMARK
TYPE A		С		г 	
17.870 FLEX. 2	2		1		
18.610 FLEX. 1	2				
21.990 RIGID	-				
23.630 RIGID					
28.340 FLEX. 2					
31.710 FLEX. 1					· · · · · · · · · · · · · · · · · · ·
42.010 FLEX.	2+4				80-100% OPEN
44.640 FLEX. 1	3				
45.320 FLEX.	2				
46.510 FLEX. 1	1				
	1+3				
48.840 FLEX. 1	4				
49.320 FLEX. 2			4		
53.610 FLEX.					
54.830 FLEX. 4+5	2 3			2	80-100% OPEN
55.650 FLEX. 3	3			2	90-100# OFEN
56.870 FLEX. 1+5					
57.890 FLEX.	2		,		
58.950 FLEX. 4	1		1		i i
59.790 FLEX.	. 2		1		80-100% OPEN
64.670 FLEX. 1+5	_		T		80-100% OPEN
86.970 FLEX. 1+5	2		2		
68.800 FLEX. 1			4		
70.950 FLEX. 5+6+8	2		3		
72.620 FLEX.	2		3		
74.270 FLEX. 2+4+5	1		3		
75.930 FLEX.					

NUMBER OF OPEN OUTLET PIPE = 27 % OF OPEN OUTLET PIPE = 49.1

* COMPRESSED/BLOCKED OUTLET PIPE *
ROUTE = I-71
DIRECTION = SOUTH
INSP.DATE = JULY 1991

MILEPOST PIPE		PIPE	CONDIT	ION	 AT		REMAR	K		
MILEPOST PIPE TYPE	A	В	C	D	E	F				
							0 8		AT 3.0)
15.860 FLEX.	2	5+6					40-60 %	OPEN	AT 6.0)
16.720 FLEX. 19.330 FLEX.	2	215					40-60 %			
		2+3					40-60 %			
20.730 FLEX.							10-20 %			
22.870 FLEX.		1+5					40-60 %			
24.860 FLEX.	_	1+5					0 8	OPEN	AT11.0)
25.780 FLEX.	5	6					10-20 %	OPEN	AT 3.0)
26.890 PLEX.	o±c						40-60 8	OPEN	AT11.0	2
29.840 FLEX. 30.820 FLEX.	2	2+3					20-40 9			
30.820 FLEX.	5	D					20-40 9			
32.950 FLEX. 33.650 FLEX.	-	2					0 9			
33.650 FLEX.	5	5					10-20 9	OPEN	AT 8.0	0
34.850 FLEX.	Ţ	2+0					20-40			
35.780 FLEX.	1	5					40-60			
36.960 FLEX. 37.140 FLEX. 38.820 FLEX. 40.440 FLEX. 41.730 FLEX.	1+5						10-20			
37.140 FLEX.	5	_					40-60			
38.820 FLEX.		ב					10-20			
40.440 FLEX.		5					40-60			
41.730 FLEX.	•	1+3					40-60			
50.820 FLEX.							40-60			
51.740 FLEX.							60-80			
61.500 FLEX.								0.000	3 m A (0
62.600 FLEX.		5					0 9	OPEN	AT 5.0	0
63.310 FLEX.							KU-KU	K OPEN		
65.420 FLEX.	1+2	4+5					40-60	OPEN	AT 0.0	0
67.950 FLEX.	415	4+3 5					0	OPEN	AT 7.0	0
71.220 FLEX.		J					10-20	OPEN	AT 2.0	0
73.900 FLEX.	J									

NUMBER OF BLOCKED/COMPRESSED OUTLET PIPE = 28 % OF BLOCKED/COMPRESSED OUTLET PIPE = 50.9